

ANNUAL REPORT  
OF THE  
MEDICAL OFFICER OF HEALTH  
TO THE  
COMBINED DISTRICTS OF  
EAST HERTS & ESSEX,  
FOR 1897.

---

---

J. ANDREW TURNER, M.B., D.P.H.

---

---

BISHOP'S STORTFORD:  
MARDON BROS., "OBSERVER" PRINTING WORKS.

---

MDCCCXCVIII



# ❖ REPORT. ❖



HERTFORD, HERTS,

*January 29th, 1898.*

GENTLEMEN,

I have now the pleasure of presenting to you my first Annual Report.

This Report includes the Urban Districts of Hertford, Ware, Bishop's Stortford, and Hoddesdon, and the Rural Districts of Hertford, Ware, Buntingford, Hadham, and Stansted, Essex.

I have made a separate report of the statistics of each District, and also a combined report, so as to compare the figures.

No report of a Medical Officer of Health has been made since 1894, therefore I have had no figures or matter to help me in compiling this report.

There are now nine Districts in the combination, as the Bishop's Stortford Rural has been divided into two, and Hoddesdon is a separate Urban District.

The Local Government Board requested me to prepare the statistics for 1895 and 1896, and I had much difficulty in doing so, as the Death and Sickness returns had not been kept, and I have been at much trouble in obtaining them.

I therefore give the figures for 1895 and 1896 for the whole combination.

In this report will be found a description of the water supply, and sewage disposal; reference to outbreaks of disease, and what has been done during the year in abatement of nuisances; the means used for controlling infectious disease, and the Hospital accommodation.

As I only took up my duties on March 25th, 1897, I am responsible for nine months of the past year, but have endeavoured to include anything of importance occurring previous to that date.

I give the tables of Deaths and Sickness Returns for all the Districts, also for England and Wales, and the combined District, so that the figures may be compared.

Each parish has a short description of its condition.

#### Statistics for the whole of England and Wales for 1897.

The Birth Rate was	29.5	per 1,000	of the population.
„ Death „ „	17.9	„ „	„
Zymotic Death Rate was	2.2	„ „	„
Phthisis	1.3	„ „	„
Other Lung Diseases	3.4	„ „	„
Cancer	0.755	„ „	„
Infant Mortality	159	„ „	births.

#### Statistics of the Combined Districts for 1897.

The Birth Rate was	25.1	per 1,000	of the population.
„ Death „ „	13.5	„ „	„
Zymotic Death Rate was	1.08	„ „	„
Phthisis	1.1	„ „	„
Other Lung Diseases	2.08	„ „	„
Cancer	.58	„ „	„
Infant Mortality	92.3	„ „	births.

---

# Hertford Urban District Council.

HERTFORD, HERTS,

*January 17th, 1898.*

As no record of the statistics for 1895 and 1896 has been kept, I am unable to compare the figures of 1897 with those of 1896.

## Population.

In 1891, by the census, the population of the whole Borough was estimated to be 9,023.

In the Annual Report of the Medical Officer of Health for 1894 (the last report available), the population was estimated to be 8,947; that figure was estimated according to the usual method—taking for granted that the decrease in the population which took place between 1881 and 1891 would continue.

The population between 1881 and 1891 decreased by 199, or 25·587 per 1,000.

Estimating with Logarithms, which is the usual method for calculating populations, it will be seen that the Logarithm of the decrease between 1881 and 1891 is 0·011313.

After 1891 Bengeo was included in the Borough, bringing the Census population to 9,023=log. 3·955351.

If the annual decrease in the extended Borough still holds good, after deducting logs., the six years annual decrease, and the log.  $\frac{1}{4}$  of the annual decrease, the log. of estimated population to the middle of 1897 would be log. 3·9471491=8,877 population middle of 1897.

I have, however, reason to believe that the decrease since 1891 has not continued, and am therefore calculating the Death and Birth Rates on the Census population of 1891.

Birth Rate was	26·2	per	1,000	of the population.
Death „	17·5	„	„	„
Zymotic Death Rate was	2·1	„	„	„
Phthisis	1·8	„	„	„
Cancer	·8	„	„	„
Disease of Lungs				
(other than Phthisis)	3·3	„	„	„
Infant Mortality	142·4	„	„	births.

The Birth Rate is below the average rate for England and Wales.

The Death Rate is about the average for the whole of England and Wales.



The Zymotic Death Rate is less.

The Infant Mortality is high for a small town.

The increase in the Zymotic Death Rate is due to the epidemic of Measles during the last quarter of the year, 19 deaths having occurred from that disease alone, all under five years of age.

Up to October 29th no deaths from the ordinary infectious diseases had occurred.

The deaths of infants under one year is very high ; out of 237 born, 34 died before they were one year old.

In large towns where the mothers are engaged in work at factories during the day, leaving their children at home in incompetent hands, a high infant mortality is partly accounted for, but in a small town like Hertford, where there are no such factories, I see no reason why this high mortality should exist.

The causes of these deaths are registered as due to Premature Birth, Bronchitis, Diarrhoea, Tuberculosis, and Measles.

On referring to the tables it will be seen that 17 deaths were due to Phthisis, eight to Cancer.

#### Notiflication of Infectious Disease.

Twenty-one cases of Infectious Disease were notified during the year, they were:—

Typhoid Fever	...	...	...	3 cases.
Diphtheria	...	...	...	5 „
Scarlet Fever	...	...	...	4 „
Erysipelas	...	...	...	9 „
				<hr/>
Total	...	...	...	21 „

In addition to these, several cases of Influenza and a great many cases of Measles occurred ; with the exception of Measles, the town was very free from infectious disease.

#### Typhoid Fever.

Three cases notified ; all were traced to an outside source.

One case was removed to the Workhouse Infirmary, the other two were treated at home.

#### Measles.

A serious epidemic of this disease began in October ; it was necessary to close the schools ; 19 deaths occurred.

#### Scarlet Fever.

Four cases notified ; all removed to Hospital, and no spread of the disease occurred ; the houses were disinfected.

### Diphtheria.

Five cases notified, one of these being a nurse at the Infirmary, who contracted the disease while nursing a child at Hall Green.

One case at the Barracks, which was contracted outside the town.

Two cases at the Grammar School.

One case in St. Andrew's Street.

All these were mild cases only, one being verified by Bacteriological Examination; four cases of suspicious throats were Bacteriologically examined by me and proved not to be Diphtheria.

A serious outbreak of a disease notified as Influenza of a Typhoid type, occurred at two houses in Port Vale, early in the year, occupied by Mrs. Searl and Mrs. Capel.

Two deaths occurred, and the rest of the family were seriously ill.

On making inquiries I found that a similar outbreak of the disease had occurred at Waterford, about  $1\frac{1}{2}$  miles out of Hertford, in the house of Mrs. Mardel, sister to Mrs. Searl.

The body of Mrs. E. G. (sister to Mrs. Mardel) was brought from Lambeth to Waterford to be buried there, in October, 1896.

The cause of death could not be ascertained, so I wrote to the Medical Officer of Health for Lambeth, and received a copy of the death certificate, saying the death was due to Typhoid Fever.

Mrs. Mardel, of Waterford, had been to London to see her sister, and when she died, came home with the coffin.

Mrs. Mardel was taken ill and died, Feb. 25th, 1897; her child also died, while others in the family also contracted the disease.

Mrs. Searl, of Port Vale, sister to Mrs. Mardel, nursed the latter at Waterford.

Mrs. Searl took ill in February, and was removed to the Infirmary later; two children were removed to the Workhouse, and did not contract the disease.

Mrs. Capel, of Port Vale (next house), visited Mrs. Searl during her illness and helped to nurse her; Mrs. Capel and all her children contracted the disease; two children died.

Two nurses were engaged and every precaution taken to prevent the spread of the disease, which was confined to the two houses.

The houses were very dirty, and certain insanitary conditions existed which have since been abated.

Briefly, then, the disease was imported from Lambeth to Waterford, and thence to Port Vale.

The virulence of the disease was accentuated by the filthy surroundings and want of proper food, etc.

#### **Drainage and Sewage Disposal (Hertford Urban).**

The sewage of the town is delivered at the Sewage Works, just outside the town, where it is treated with chemicals, and afterwards passes through two sets of filtering tanks.

This sewage is diluted before it reaches the Sewage Works by an enormous amount of subsoil water which enters the sewers.

The effluent, after it leaves the works, is discharged into a cutting, which is paved at the bottom with bricks for a greater part of its distance; the effluent here is again diluted with storm water, and flows for nearly a mile, to discharge into a manifold ditch, and ultimately into the River Lea at Ware.

This effluent is analysed four times a year, and with very satisfactory results.

#### **Water Supply (Hertford Urban).**

The town is supplied with water from three sources :—

- (1). A deep well at Molewood, being pumped into a reservoir, and delivered in iron pipes by gravitation.
- (2). A deep tube well at Hartham, the water being pumped by water power, and delivered direct from the tube.
- (3). A shallow well, sunk alongside the River Beane at Waterford, the water being pumped up by water power.
- (4). An emergency well, sunk alongside the River Lea at Port Hill. This water is not used except in an emergency, and will be analysed before it is used as a public supply.

I have made a chemical analysis of five samples of water from the different sources of supply to the town.

No. 1, from Molewood supply.

„ 2, „ Waterford „

„ 3, „ Hartham „

„ 4, „ a tap in the Corporation Yard.

„ 5, „ „ a house in Bengoe Street, Bengoe.

I append a detailed analysis.

I find that all these waters are of a high standard of purity, and free from any organic pollution.

All the waters are somewhat hard, this being due to the presence of chalk; most of this hardness is removable by boiling.

The solids consist chiefly of carbonate of lime.

These waters compare very favourably with the chief water supplies of England, samples of which I give on the accompanying form.



# HERTFORD URBAN DISTRICT COUNCIL.

## ANALYTICAL REPORT.

Water from	Appearance in two foot tube.	Smell when heated to 100°.	Microscopical Examination.	ALL RESULTS STATED IN GRAINS PER GALLON.					Hardness in degrees.
				Oxygen absorbed in 10 min. at 100°	Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	
No. 1. Molewood supply	Clear, blue ...	None ...	Satisfactory	·014	22·5	1·4	Nil.	Nil.	
No. 2. Waterford supply	Clear, blue ...	None ...	Satisfactory	·014	21·0	1·4	Nil.	·0014	
No. 3. Tap in Corpora- tion yard ...	Clear, blue ...	None ...	Satisfactory	·028	22·436	1·68	Nil.	·0014	
No. 4. Hartham Well...	Clear, blue ...	None ...	Satisfactory	·014	28·0	1·6	Nil.	·0014	
No. 5. Tap in Mr. Ro- berts' house, Bengeo Street-	Clear, blue ...	None ...	Satisfactory	·028	21·7	1·4	Nil.	·0014	

Summary of Work done through the Sanitary Inspector in the Hertford Urban District during the Year ending December 31st, 1897.

	Total Number for Year.	Results of Inspection, &c.
Notices served ... ..	24	Necessary work executed.
Summonses taken out .. ...	1	Conviction.
Convictions ... ..	1	
Premises inspected .. ...	446	
Lodginghouses inspected ...		Inspected by Supt. of Police.
Slaughterhouses inspected ... ..	5	
Bakehouses inspected ... ..	6	
Filthy houses cleansed, sec. 46 Public Health Act, 1875 .. ..	7	
Houses disinfected ... ..	3	
Overcrowding abated ... ..	7	
Houses placed in habitable repair ...	7	
Houses erected or re-built, for which "Certificates" were applied... ..	32	
"Certificates" granted... ..		All that were applied for.
Houses connected with sewers... ..		All new houses.
„ „ with water mains ...		Ditto.
Animals improperly kept removed ...	3	Cases removed.
Samples of water taken for Analysis ...	7	

*Signed* JOHN HENRY JEVONS.

(A) TABLE OF DEATHS during the Year 1897, in the HERTFORD URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																			
	At all ages.	Under 1 year.	1 and under 6.	5 and under 16.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Pituitis.	Bronchitis Pneumonia & Pleurisy	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
HERTFORD .. ..	146	31	26	4	10	41	34	Under 5 5 upwds.	...	...	...	...	...	...	...	19	...	4	...	3	13	...	...	...	18	57	
INFIRMARY ... ..	19	3	...	...	4	9	3	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	3	...	...	1	...	1	4	3
TOTALS ... ..	165	34	26	4	14	50	37	Under 5 5 upwds.	...	...	...	...	...	...	...	19	...	4	...	3	13	...	...	...	21	60	
The subjoined numbers have also to be taken into account in judging of the above records of mortality.																											
Deaths occurring within the district among persons not belonging thereto ...	8	...	...	...	2	5	1	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	2	...	8





**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the HERTFORD URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.			
									Typhus.	Enteric or Typhoid.	Continued.	Relaps ag.	Puerperal.					
HERTFORD URBAN	9023	...	...	Under 5 5 upwards	... ...	... 4	2 3	... ...	... ...	... 3	... ...	... ...	... ..	... ...	... 9	... 4	... ...	... 2
TOTALS ...	9023	...	...	Under 5 5 upwards	... ...	... 4	2 3	... ...	... ...	... 3	... ...	... ...	... ...	... ...	... 9	... 4	... ...	... 2



# Bishop's Stortford Urban District Council.

HERTFORD, HERTS.

*February 10th, 1898.*

## Annual Report of the Medical Officer of Health for 1897.

### Population.

The population of the town, estimated to the middle of 1897. was 6,528.

The Birth Rate was:— 28·9 per 1,000 of the population.

„ Death „ „	15·7	„	„	„
Zymotic „ „	·3	„	„	„
Phthisis „ „	·9	„	„	„
Other Lung Diseases	·7	„	„	„
Cancer	·7	„	„	„
Infant Mortality	83·7	„	„	births.

These figures compare very favourably with the rest of England and Wales.

The Zymotic death rate is very low, also the Infant Mortality.

Out of a total of 145 deaths, 46 were of persons over 41 years of age; 27 deaths occurred in the Workhouse, many of them persons not belonging to the town.

### Deaths from Zymotic Disease.

There were three deaths due to infectious disease, viz.:—

Diphtheria	...	1
Whooping Cough...	1	
Erysipelas	...	1 at the Workhouse.

### Notification of Infectious Disease.

There were 8 cases of infectious disease notified, viz.:—

Diphtheria	...	...	...	7 cases.
Typhoid Fever	...	...	...	1 „

I have already reported to you on the occurrence of Diphtheria at the Grammar School, and I include extracts of my reports, under the heading of Diphtheria.

### Water Supply.

I analysed four samples of the town water, and append the result of analysis.

There still exist many wells in the town, the condition of which should be inquired into.

# BISHOP'S STORTFORD URBAN DISTRICT COUNCIL.

## ANALYTICAL REPORT.

Water from	Appearance in two foot tube.	Smell when heated to 100°.	Microscopical Examination.	ALL RESULTS STATED IN GRAINS PER GALLON.					Hardness in degrees.
				Oxygen absorbed in 10 min. at 100°.	Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	
No. 1. The Reservoir, Bp's Stortford.	Clear ...	None ..	Satisfactory ...	·028	29·4	1·4	None ..	·0014	26
No. 2. Main, South Mill, London Road.	Clear, with some sediment ...	None ...	Some animal and vegetable deposit ...	·028	27·	1·89	None ...	·0014	
No. 3. Main near Nag's Head, in Dun- mow Road ...	Ditto ...	None ...	Ditto ...	·028	26·	1·82	None ...	·0014	
No. 4. Main near Ceme- tery gates. ...	Ditto ...	None ...	Ditto ...	·028	28·	1·82	None ...	·0014	

All these four samples of water are of a very high standard of purity, and fit for all domestic purposes.  
There is no evidence of any organic impurity.

*November 12th, 1897.*



### Drainage and Sewage.

This important question has received a great deal of attention from the Council, and is still under consideration.

I have included the chief points in this report, bringing the matter up to date.

In July I reported as follows :—

“I should like to suggest for your Council’s consideration these following points.

“1. Have all the methods for reducing the quantity of sewage now dealt with been considered?

“2. In view of the proposed delivery of the night sewage on to land outside the district, there may be some opposition from the adjoining Authority.

“Under this head I would also point out, that even if the fall be sufficient, the laying of pipes in the water-logged land adjoining the river will be a difficult matter. An enormous quantity of subsoil water as well as night sewage will gain access to these pipes, the whole of which will be delivered on to the fresh irrigating area.

“If it were possible to reduce the quantity of sewage by relaying the sewers with iron pipes, the present pumping power and land available would be more than sufficient for the purpose.

“The objection urged against re-laying the sewer, viz :—that by dealing with the sewage during the re-laying of the sewers, could be overcome by leaving in the present sewers until the last moment, and then dropping in the new pipes by degrees, the old sewers would then remain and carry off the subsoil water.

“By using iron pipes of a smaller diameter and laying them above the level of the present sewers, a better fall could be obtained.

“3. Could not the sewage from Hockerill be diverted and discharged on to the land just above the tanks, by gravitation?

“This land could, with little outlay, be made suitable for receiving and dealing with a large amount of sewage, thus relieving the tanks and pumps.

“I now strongly urge, that before deciding on the extension of the sewers to Spelbrook, all the methods of reducing the quantity of sewage be considered.”

### Disposal of Sewage.

The day sewage is pumped on to a large area of ground, the effluent, which finds its way into the Stort, has been analysed, and the result is very satisfactory.

The disposal of the night sewage is the difficult problem, and is now receiving attention from the Council.

Three schemes have been proposed, viz.:—

1. Taking the night sewage to Spelbrook and discharging it on to land. This does not seem practical.
2. Pumping night and day at double the present cost.
3. Re-laying the sewers, so as to include the subsoil and surface water.

This last suggestion is now being thoroughly inquired into, and gaugings are being made to ascertain the amount of water gaining access to the sewers.

There is no doubt that if this sub-soil water <sup>was excluded</sup> has elevation, the disposal of the sewage proper over the sewage farm would present little difficulty.

#### Infectious Diseases.—Diphtheria.

A case was notified in October, and removed to Hospital from the Boar's Head publichouse.

The patient was a lad who had been carding mattresses which had been removed from a house in the town where six cases of Diphtheria had occurred in 1896.

I should say that this is the most probable cause of the re-appearance of the disease.

Two cases were notified at the Nonconformist Grammar School.

I visited the School and inspected the sanitary arrangements and found them to be satisfactory.

Both of the boys were isolated, one at the hospital in connection with the School, and the other, who is a day boy, in the Isolation Hospital belonging to the Council.

During the month of December two cases of Diphtheria were notified to me, at the Grammar School, both maid servants, who were removed to the Private Isolation Hospital.

In all, six cases of this disease occurred there, three of which were domestic servants.

The type of disease has been a mild one, no deaths occurring.

It is a noticeable fact in this disease that when an outbreak occurs amongst persons over five years of age, it is always more easily resisted.

In my investigation as to the cause of the outbreak, I examined the sanitary arrangements of the School, and found them satisfactory.

I made a chemical and bacteriological examination of the water and milk supplied to the School, and could find no pathological organism likely to be the cause of the disease.

On making inquiries as to any possible outside influence, I was informed that no case of throat illness had occurred.

It was afterwards discovered that a domestic servant had suffered from sore throat, and had been sent home, but had returned to her duties a week previous to the first case that was notified.

I made a bacteriological examination of the throat of this servant, and found it to contain Diphtheria Bacillus.

After that another servant contracted the disease, and was removed to Hospital.

I am therefore of the opinion that the outbreak originated with the maid, but where she contracted it it is difficult to say.

No further case has occurred since.

---





Summary of Work done through the Sanitary Inspector in the Bishop's Stortford Urban District during the year ending December 31st, 1897.

	Total Number for Year.	Results of Inspection, &c.
Complaints received ... ..	45	
Nuisances detected ... ..	45	
Nuisances abated .. ...	45	
Notices served ... ..	35	
Cottages inspected ... ..	no record.	
Lodging-houses inspected ... ..	1	
Slaughter-houses inspected ... ..	6	
Dairies and Milk Shops inspected ...	1	
Cowsheds inspected ... ..	7	
Workshops inspected ... ..	1	
Houses disinfected ... ..	6	
Overcrowding abated ... ..	3	
Houses connected with sewers...	no old ones.	
„ „ with water mains ...	3	

(Signed) ALFRED CASS,

Sanitary Inspector.



**(A) TABLE OF DEATHS during the Year 1897, in the BISHOP'S STORTFORD URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																			
	At all ages.	Under 1 year.	1 and under 6.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
BISHOP'S STORTFORD	90	15	5	5	7	32	26	Under 5 5 upwds.	...	...	1	...	...	...	...	...	1	2	...	...	6	...	...	...	10	20	
UNION WORKHOUSE	27	1	...	2	...	4	20	Under 5 5 upwds.	...	...	...	...	...	...	1	...	...	1	...	...	1	1	3	...	1	1	
ISOLATION HOSPITAL	6	...	4	2	...	...	...	Under 5 5 upwds.	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	4	
COTTAGE HOSPITAL	2	...	...	...	...	2	...	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	2	
TOTALS ... ..	125	16	9	9	7	38	46	Under 5 5 upwds.	...	...	5	2	...	...	1	...	1	2	...	...	6	11	12	5	5	11	25
															1	..	..	1	...	6	11	12	5	5	11	100	





**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the BISHOP'S STORTFORD URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages,		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.			
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.			Scarlatina.	Diphtheria.	Enteric or Typhoid Fever.
BISHOP'S STORTFORD	6595	6528	179	Under 5 5 upwards	...	...	1 6	...	...	1	...	...	...	...	...	...	6	...
TOTALS ...	6595	6528	179	Under 5 5 upwards	...	...	1 6	...	...	1	...	...	...	...	...	...	6	...



## Ware Urban District Council.

HERTFORD, HERTS.

*February 7th, 1898.*

### Annual Report of the Medical Officer of Health for 1897.

#### Population.

The population of the District estimated to the middle of 1897, was 5243.

This population is estimated in the following way — the Logarithm of the population in 1891 = log. 3.720655.

The log. of the decrease between 1881 and 1891 = log. .001732.

„ „ „ in one year = log. .0001732.

„ „ „ in one quarter = log. .0000433.

In this way it is ascertained that the log. of the population at the middle of 1897, is log. 3.7193933 = 5243.

The Birth Rate was :— 31.3 per 1,000 of the population.

„ „ „	16.5	„	„	„
Zymotic „ „	1.9	„	„	„
Diarrhœa „ „	1.8	„	„	„
Phthisis „ „	2.2	„	„	„
Other Lung Diseases	4	„	„	„
Cancer	.9	„	„	„
Infant Mortality	157.2	„	„	births.

The Birth Rate is above the average.

The Death Rate is below the average.

The Zymotic Death Rate is below the average.

The Infant Mortality is very high, much higher than it should be for a town of this description ; out of 164 births, 26 died under 1 year of age ; the deaths were due to measles, diarrhœa, bronchitis, premature birth, convulsions, tuberculosis.

In large towns where factories exist and the mothers leave them in incompetent hands while they work in the factories, a high mortality is partly accounted for, but, in small towns where there are no such factories, there is no reason for such a high infant death rate.

#### Deaths Over 65 Years of Age.

Out of a total of 87 deaths at all ages, 26 were over 65 years of age.

Besides these 87 deaths, 31 occurred at the Workhouse, and are not included in these figures ; 20 of them were over 65 years of age.

### Deaths from Zymotic or Infectious Disease.

There were 10 deaths due to infectious disease, viz :—

Diphtheria	...	2 deaths.
Measles	...	7 „
Erysipelas	...	1 at the Workhouse.

In addition 9 deaths were due to diarrhoea, 12 to phthisis, and 5 to cancer, the death rate for phthisis being above the average.

### Notification of Infectious Disease.

There were 15 cases of infectious disease notified, viz :—

Scarlet Fever	...	...	1 case.
Diphtheria	...	...	5 „
Typhoid Fever	...	...	2 „
Erysipelas	...	...	7 „

No serious outbreak of infectious disease occurred besides measles, and that disease is not included in the diseases compulsorily notified under the act.

### Measles.

Measles were very prevalent all over the county, and the schools in Ware had to be closed.

### Diphtheria.

Up to the present it has been impossible to isolate diphtheria but for the future we shall have the advantage of the Ware Hospital for treating this disease, and thus be able to remove cases at once.

1 case of scarlet fever was removed to Hospital.

1 case of typhoid fever was removed to the Infirmary at Hertford.

### Water Supply.

The town is chiefly supplied with water from a deep well in the chalk, the water being pumped into a reservoir and delivered by means of iron pipes; some wells exist which are being inspected.

I have analysed a sample of the water from the waterworks, and append the analysis.

### Drainage and Sewage Disposal.

The town is well sewered and the sewage is delivered on to a Sewage Farm outside the district.

The farm is regularly inspected and does its work satisfactorily.

The sewer is regularly flushed and inspected,

### Flushing of W.C's.

I have drawn your attention to the absence of proper means for flushing w.c's, and I would urge upon your Board the desirability of adopting the Public Health Act (Amendment Act), relating to the adoption of Bye-laws for the provision of a proper means of flushing w.c's, at all times.

No w.c. of the poorer classes is efficiently flushed by hand, in most cases the basins are dirty and offensive, and perhaps may become unsyphoned and the drain blocked.

Flushing cisterns can be kept in order by supervision, but no supervision of the Sanitary Inspector can keep a closet clean, which has no flushing apparatus.

In a family of five persons, who daily use the closet, it should be flushed 5 times, with at least 2 gallons of water each time it is used.

If this has to be done by hand, the labour entailed will soon prevent the efficient flushing of the w.c.

Although some of the w.c's. are situated outside, the cisterns can be protected from frost.

I have had to report to you on certain premises being unfit for the purpose for which they were used, and orders were given for certain improvements.

I would suggest that strict supervision be exercised with regard to Dairies and Cowsheds, Slaughterhouses, Fishshops, and Workshops.

In my report for the combined districts, I have mentioned the Water Supply and Sewage Arrangements, and also dealt with the Hospital Accommodation.

I include in this report the table of death, birth, and sickness returns, as required by the Local Government Board.

---



**Summary of Work done through the Sanitary Inspector in the Ware Urban District during the year ending December 31st, 1897.**

	Total Number for Year.	Results of Inspection, &c.
Complaints received ... ..		No record kept of complaints.
Nuisances detected ... ..	105	
Nuisances abated ... ..	105	
Notices served ... ..	12	
Cottages inspected ..	35	
Lodginghouses inspected ..	2	
Slaughterhouses inspected ... ..	6	
Bakehouses inspected ... ..	4	
Dairies and Milk Shops inspected ...	6	Inspected 4 times a year.
Cowsheds inspected ... ..	5	
Filthy houses cleaned, sec. 46 Public Health Act, 1875 ... ..	13	
Houses disinfected ... ..	25	
Overcrowding abated ... ..	2	
Houses placed in habitable repair ..	7	
Houses closed ... ..	2	
Houses erected or re-built, for which "Certificates" were applied... ..	20	
"Certificates" granted... ..	20	
Wells closed ... ..	3	
Houses connected with sewers... ..		All the Houses are connected.
„ „ with water mains ...		Approximately, 60 houses not connected with Water Mains.
Samples of water taken for Analysis ..	3	

*Signed JOS. GODDARD.*

**(A) TABLE OF DEATHS during the Year 1897, in the WARE URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Fueral Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phtisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
WARE ... ..	87	26	13	1	2	19	26	Under 5 5 upwds.	...	...	1	...	...	...	...	...	7	...	7	...	...	9	...	...	1	14	39	
UNION WORKHOUSE	31	...	...	...	1	10	20	Under 5 5 upwds.	...	...	...	...	...	...	...	1	...	...	...	...	...	5	10	...	...	...	15	...
TOTALS ... ..	118	26	13	1	3	29	46	Under 5 5 upwds.	...	...	1	...	...	...	...	1	7	...	7	...	...	9	...	...	1	14	39	
									...	...	1	...	...	...	...	...	...	...	2	...	12	12	5	5	1	40	79	



(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the WARE URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.				
								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
WARE ... ..	5256	5243	164	Under 5 5 upwards	... 1	1 4	... ...	... ...	... 2	... ...	... ...	... ..	... ...	... 4	... 1	... ...	... 2	
UNION WORKHOUSE	...	...	...	Under 5 5 upwards	... ...	... ...	... ...	... ...	... ...	... .	... ...	... ...	... ...	3	...	...	...	
TOTALS ...	5256	5243	164	Under 5 5 upwards	... 1	1 4	... ...	... ...	... 2	... ...	... ...	... ...	... ...	7	1	...	2	



## Hoddesdon Urban District Council.

HERTFORD, HERTS.

### Annual Report of the Medical Officer of Health for 1897.

#### Population.

I have estimated the population to be 4542.

The increase between 1881 and 1891 was 867.

If the rate of increase has continued, the population at the middle of 1897 will be 4542.

117 Births and 41 Deaths have occurred, giving a—

Birth Rate was 25·7 per 1000 of the population.

Death „ „ 9·02 „ „ „

Zymotic „ 0·0 „ „ „

Infant Mortality 67·3 „ „ Births.

4 deaths occurred from Phthisis.

8 from other Lung Diseases.

Thus it will be seen that no deaths occurred from any infectious disease during the year.

The death rate is very low.

#### Notification of Infectious Disease.

Only 4 cases of infectious disease were notified during the year, viz., 4 of Scarlet Fever.

These were all removed to Hospital and the houses disinfected.

When a case of infectious disease is notified the house is visited, and if possible the patient is removed.

The house is fumigated and the clothes disinfected.

#### Infant Mortality.

The infant mortality is much below the average.

#### Death of Old People.

Out of a total of 41 deaths, 11 were of people over 65 years of age.

#### Water Supply.

The water supply to the town is from the Hoddesdon Water Works Company.

The water is from a deep well in the chalk and pumped to towers and thence to the town.



### Drainage and Sewage.

The Sewage Farm has performed its duties satisfactorily during the year.

A few alterations and improvements have been made, the area of ground for receiving the sewage has been increased by levelling, and the ditches cleaned out, and a filter bed placed in the ditch below the farm.

I have visited the farm on several occasions and found great improvements since these alterations.

Owing to the amount of subsoil and surface water getting into the sewers, the farm has to deal with a large amount of sewage.

There remains room for improvement in the disconnection and ventilation of house drains, which should receive attention.

### Flushing Cisterns.

Also with regard to flushing cisterns : no W.C. in the houses of the poorer classes can be efficiently flushed by hand.

In most cases the basins are dirty and offensive, and the traps may become unsyphoned and the drain blocked.

Flushing cisterns can be kept in order by supervision, but no supervision of the Sanitary Inspector can keep a closet clean which has no flushing tank.

In a family of 5 people, who daily use the closet, the closet should be flushed 5 times with at least 2 gallons of water daily per head.

If this has to be done by hand, the labour entailed would soon render the most enthusiastic occupier careless.

By adopting Part II of the Amendment Act, 1890, bye-laws can be made in dealing with proper means of flushing W.C's.

### Houses Unfit for Habitation.

Three houses have been closed, being unfit for habitation, and several cases of overcrowding abated.

### Removal of Refuse.

This is done at present by contract.

It would be preferable if the Authority undertook the matter as it would receive more prompt attention.

The slaughter houses have been inspected and found to be satisfactory.

Cowsheds and Dairies have been inspected, and reports made to the Council.

In one or two cases certain alterations will have to be made, and notices have been served on the owners.

This report will be included in the joint report for the whole of the combined districts, and the tables relating to the Mortality, Birth, and Sickness returns, appended.

---

**Summary of Work done through the Sanitary Inspector in the  
Urban Sanitary District of Hoddesdon during the Year ending  
December 31st, 1897.**

	Total Number for Year.	Results of Inspection, &c.
Complaints received ... ..	12	
Nuisances detected ... ..	34	
Nuisances abated ... ..	23	
Notices served ... ..	4	
Cottages inspected ... ..	81	
Slaughter-houses inspected ... ..	24	No. of Inspections.
Bakehouses inspected ... ..	6	No. of Inspections.
Dairies and Milk Shops inspected ...	28	No. of Inspections.
Cowsheds inspected ... ..		No. of Inspections.
Workshops inspected ... ..	1	No. of Inspections.
Filthy houses cleansed, sec. 46 Public Health Act, 1875 ... ..		2 dirty houses cleansed.
Houses disinfected ... ..	4	
Overcrowding abated ... ..	3	
Houses placed in habitable repair ...	7	
Houses closed ... ..	4	
Houses erected or re-built, for which "Certificates" were applied ...	11	
Canal boats put into sanitary condition	2	
"Certificates" granted... ..	11	
Wells sunk or improved supplies of water afforded ... ..	2	
Houses connected with sewers ...	15	
„ „ with water mains ...	2	
Earth, pail, or improved Privies con- structed or existing Privies altered ...	2	
Privies and W.C.'s repaired ... ..	8	
Animals improperly kept removed ...	3	

*(Signed) T. SALKIELD.*

**(A) TABLE OF DEATHS during the Year 1897, in the HODDESDON URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
HODDESDON ... ..	41	8	...	1	...	21	11	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	1	...	...	4	2	...	...	...	5	8
									...	...	...	...	...	...	...	...	...	...	...	...	...	6	2	...	...	3	18	33
TOTALS ... ..	41	8	...	1	...	21	11	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	1	...	...	4	2	...	...	...	5	8
									...	...	...	...	...	...	...	...	...	...	...	...	...	6	2	...	...	3	18	33



**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the HODDESDON URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.			
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.					
HODDESDON ... ..	...	4542	117	Under 5 5 upwards	...	1 3	...	...	...	...	...	...	...	...	...	1 3	...	...
TOTALS ... ..	...	4542	117	Under 5 5 upwards	...	1 3	...	...	...	...	...	...	...	...	...	1 3	...	...





# Hertford Rural District Council.

HERTFORD, HERTS,

*January 24th, 1898.*

## Annual Report of the Medical Officer of Health.

### Population.

The population, estimated to the middle of 1897, is 8,511.

The Birth Rate was 22·7 per 1,000 of the population.

„ Death „	13·2	„	„	„
Zymotic Death Rate was	·35	„	„	„
Cancer „ „	·7	„	„	„
Phthisis „ „	1·2	„	„	„
Other Lung Diseases	1·8	„	„	„
Infant Mortality	30·9	„	„	births.

These figures are very satisfactory, and compare very favourably with those of the rest of England and Wales.

### Infectious Disease.

Only three deaths occurred from Infectious Disease, viz. :—

One from Diphtheria at Hertingfordbury.

„ „ Measles at Walkern.

„ „ „ the Workhouse.

### Notification of Infectious Disease.

There were 59 cases of Infectious Disease notified, viz. :—

Scarlet Fever	...	New Knebworth	...	1
„ „	...	Datchworth	...	2
„ „	...	Hertford Heath	...	18
„ „	...	Bayfordbury	...	7
„ „	...	Stapleford	...	2
„ „	...	Bengeo...	...	1
Diphtheria	...	Datchworth	...	5
„	...	Waterford	...	1
„	...	Aston	...	3
„	...	Sacomb House	...	1
„	...	Walkern	...	2
„	...	Bramfield	...	1
„	...	Hertingfordbury	...	1
„	...	Burnham Green	...	6
Typhoid Fever	...	Hertford Heath	...	5
„ „	...	Walkern	...	1
„ „	...	Tewin	...	1
Erysipelas	...	Hertford Heath	...	1

### Diphtheria.

A fatal case occurred in a cottage at Hertingfordbury; the disease had appeared in the same house two years previously, and one child died.

Certain insanitary conditions existed which have been remedied, and I refer to them more fully in another part of my report.

At Burnham Green and Datchworth, Diphtheritic throats were notified; these were of a mild form, and not examined Bacteriologically.

In future I hope that all cases of suspected Diphtheria will be examined Bacteriologically.

### Measles.

Measles occurred in many of the villages, and schools were closed at Bennington and Watton.

### Scarlet Fever.

Although 31 cases were notified, no deaths occurred.

All were removed to Hospital.

At Hertford Heath a great deal of trouble was experienced in controlling the spread of the disease; the school was closed and disinfected, but the disease continued to spread.

On making enquiries as to children absent from school through illness, I found several families away, and on visiting their houses ascertained that one family was suffering from Scarlet Fever. I removed a case from this family to Hospital, where he remained six weeks, and the Council decided to prosecute the father for not notifying the case to the Medical Officer of Health.

The Magistrates did not consider that the father was "aware" of the existence of the disease in his house, and so dismissed the case.

Since the removal of this child to Hospital, no other case occurred in the Parish.

It is much to be regretted that the "Infectious Diseases Compulsory Notification Act" is so weak in its definitions as to allow of so many loop-holes of escape from notification of those in charge of children suffering from infectious disease.

### Typhoid Fever.

Five cases occurred in one house at Hertford Heath; 2 were removed to the Infirmary.

The insanitary condition of this, and many other houses in this locality, was reported on, and certain alterations carried out.

A serious outbreak of a disease notified as Influenza of a Typhoid Type occurred early in the year at Waterford. I have given a detailed statement of this outbreak in my report for Hertford Urban District.

I refer to the water supply in another part of this report.

I include in this report a short sketch of the condition of each village.

### Condition of the District.

#### ASTON.

Water supply.—From spring and shallow wells.

Drainage.—Into ditch, some houses without drains.

Occupation of inhabitants.—Agricultural.

Disposal of refuse.—Removed by occupiers.

#### BENNINGTON.

Water supply.—Rain water tanks, wells, and a tap supplied by Dr. Parker from his private water works.

Drainage.—Into cesspools and ditches.

Disposal of refuse.—By inhabitants.

Occupation of inhabitants.—Agricultural.

Several houses have been reported as dilapidated and overcrowded, and without water.

#### BAYFORD.

Water supply.—From pond.

Drainage.—Into cesspools and ditches.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—7 cases of Scarlet Fever.

The work for providing this village with a good supply of water from a deep well, which will be pumped and delivered in iron pipes, has been commenced.

#### BRAMFIELD.

Water supply.—From well on Green.

Drainage.—Into ditches.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—One case of diphtheria.

#### BRICKENDON.

Water supply.—Wells and pond.

Drainage.—Into cesspools and ditches.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural.



**DATCHWORTH.**

Water supply.—Rain water tanks, ponds and wells, very unsatisfactory.

Drainage.—Into cesspools, some of which are close to the rain water tanks.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—Seven cases of Diphtheria.

A better supply of water is being considered by the Council ; this has been the subject of many reports (see reports).

**HERTINGFORDBURY.**

Water supply.—Shallow wells.

Drainage.—Into cesspools and river.

The drainage and refuse disposal, and water supply of this village require attention. I have been in communication with the agent of this estate and advised on several matters, and have been assured that these improvements will be carried out.

**LITTLE AMWELL AND HERTFORD HEATH.**

Water supply.—From the soakage in the subsoil of a wood near the village, which is conducted to a reservoir in the village, where a filter is placed and a pump fixed. This is unsatisfactory, and the supply inadequate, as during the summer no water was available. Many reports have been made, and the Parish Council are considering a scheme for an increased supply.

Drainage.—Pipe sewers, discharging over a meadow for irrigation purposes.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural, laundries, and brickmakers.

Diseases.—18 cases of Scarlet Fever, 5 Typhoid Fever, 1 of Erysipelas.

**LITTLE BERKHAMPSTEAD.**

Water supply.—Shallow well and spring.

Drainage.—Pipe sewer, discharging into watercourse ; steps are being taken to improve the outfall of this sewer by discharging it over a meadow for irrigation purposes. An automatic flushing tank and ventilating shaft have just been fixed at the head of this sewer.

Disposal of refuse.—Removed by occupiers.

Occupation of inhabitants.—Agricultural.



## SACOMBE.

Water supply.—From shallow wells.  
 Drainage.—Into cesspools and ditches.  
 Disposal of refuse.—Removed by occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—One case of Diphtheria.

## TEWIN.

Water supply.—From two wells.  
 Drainage.—Lower Green by pipe sewer, Upper Green into cesspools and ditches.  
 Disposal of refuse.—Removed by occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—One case of Typhoid Fever.

## WATTON.

Water supply.—From wells.  
 Drainage.—One portion into a cesspool, the other into the river.  
 Disposal of refuse.—Removed by occupiers.  
 Occupation of inhabitants.—Chiefly agricultural, tradesmen.  
 Some system of scavenging should be adopted.

## WALKERN.

Water supply.—Shallow wells, chiefly surface water ; very unsatisfactory.  
 Drainage.—Pipe sewers, discharging over a small piece of ground, which is inadequate for the amount of sewage going over it, overflow from same discharging into stream.  
 Disposal of refuse.—Removed by occupiers.  
 Occupation of inhabitants.—Brewery, tradesmen, agricultural.  
 Disease.—Two cases of Diphtheria, one of Typhoid Fever.  
 Some system of scavenging should be adopted for this village.

## STAPLEFORD.

Water supply.—From wells.  
 Drainage.—Into ditches.  
 Disposal of refuse.—By occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—Two cases of Scarlet Fever.

Tables relating to the mortality and sickness returns, as required by the Local Government Board, will be found appended to this report.

Summary of Work done through the Sanitary Inspector in the Hertford Rural District during the year ending December 31st, 1897.

	Total Number for Year.	Results of Inspection, &c.
Nuisances detected ... ..	48	
Nuisances abated ... ..	48	
Notices served ... ..	48	
Summonses taken out .. ..	1	
Cottages inspected .. ..	445	
Bakehouses inspected .. ..	2	Order for reconstruction.
Dairies and Milk Shops inspected ...	10	Three dairies dealt with, 6 registered.
Cowsheds inspected ... ..	10	
Filthy houses cleansed, sec. 46 Public Health Act, 1875 .. ..	12	
Houses disinfected ... ..	11	
Overcrowding abated ... ..	6	
Houses placed in habitable repair ...	12	
Wells sunk or improved supplies of water afforded ... ..	3	13 houses reported as having no water
Earth, pail, or improved Privies con- structed or existing Privies altered ..	8	
Samples of water taken for Analysis ...	6	

*Signed J. W. RIGGS.*

**(A) TABLE OF DEATHS during the Year 1897, in the HERTFORD RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																			
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumoniae Pleurisy	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
DATCHWORTH ... ..	11	...	1	..	...	4	6	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2	2	4	10
ASTON ... ..	7	2	...	...	...	...	5	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	1	2
WALKERN ... ..	8	1	...	1	1	4	1	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	1	...	1	1
BENNINGTON ... ..	11	..	...	...	...	4	7	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	7	11	
WATTON... ..	9	1	1	...	2	1	4	Under 5 5 upwds.	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	1	2	
SACOMBE ... ..	2	...	...	...	...	...	2	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	5	7
STAPLEFORD ... ..	2	1	...	...	...	1	...	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	
BRAMFIELD ... ..	4	...	...	...	...	2	2	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	2	4	
TEWIN ... ..	5	...	1	...	...	1	3	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	2	4	
HERTINGFORDBURY	9	...	2	...	...	6	1	Under 5 5 upwds.	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	1	2	
WATFORD & BENGEO	6	...	...	1	...	2	3	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	6	
ST. JOHN'S ... ..	1	...	...	...	...	1	...	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	
HERTFORD HEATH & LITTLE AMWELL ...	14	...	3	...	...	4	7	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	4	1	1	...	1	2	3	
BRICKENDON ... ..	1	...	...	...	...	...	1	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
BAYFORD ... ..	5	1	...	...	...	1	3	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	1	1	
LITTLE BERKHAMPSTEAD ..	6	...	...	...	...	2	4	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	4	6	
UNION WORKHOUSE	19	...	1	...	...	4	14	Under 5 5 upwds.	...	...	...	...	...	...	1	...	...	...	...	1	1	2	...	...	14	18	
TOTALS ... ..	120	6	9	2	3	37	63	Under 5 5 upwds.	...	...	1	...	...	...	...	2	...	1	...	...	3	11	12	6	5	60	105
The subjoined numbers have also to be taken into account in judging of the above records of mortality.																											
Deaths occurring within the district among persons not belonging thereto ...	7	...	...	...	...	2	5	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	4	7	



**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the HERTFORD RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Erysipelas.	Measles.	Scarlatina.	Diphtheria.	Enteric or Typhoid Fever.
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.					
NEW KNEBWORTH ...	...	...	...	Under 5 5 upwards	...	1	...	...	...	...	...	...	...	...	...	...	...	
DATCHWORTH ...	672	...	18	Under 5 5 upwards	...	1 1	1 4	...	...	...	...	...	...	...	...	...	...	
LITTLE AMWELL & HERTFORD HEATH...	815	...	28	Under 5 5 upwards	...	5 13	...	...	1 4	...	...	...	...	...	...	5 13	...	
BAYFORD...	369	...	3	Under 5 5 upwards	...	3 4	...	...	...	...	...	...	...	...	...	3 4	...	
STAPLEFORD ISOLATION HOSPITAL	216	...	6	Under 5 5 upwards	...	...	2	...	...	...	...	...	...	...	...	2	...	
WATERFORD ...	...	...	...	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	
ASTON ...	...	...	20	Under 5 5 upwards	...	...	1 2	...	...	...	...	...	...	...	...	...	...	
BENGEO RURAL ...	546	...	11	Under 5 5 upwards	...	1	...	...	...	...	...	...	...	...	...	1	...	
SACOMBE ..	250	...	4	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	
WALKERN ...	849	...	20	Under 5 5 upwards	...	...	1 1	...	1	...	...	...	...	...	...	...	...	
BRAMFIELD ..	213	...	6	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	
HERTINGFORDBURY...	797	...	10	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	
BURNHAM GREEN (see Datchworth)	...	...	...	Under 5 5 upwards	...	...	2 4	...	...	...	...	...	...	...	...	...	...	
LITTLE BERKHAMPSTEAD ...	430	...	12	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
ST. JOHN'S RURAL ...	235	...	9	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
ST. ANDREWS RURAL	...	...	...	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
WATTON ...	807	...	16	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
BENNINGTON ...	...	...	11	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
UNION WORKHOUSE...	...	...	..	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
TEWIN ...	350	...	15	Under 5 5 upwards	...	...	...	...	1	...	...	...	...	...	...	...	...	
BRICKENDON ...	163	...	5	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	
TOTALS ...	...	8511	184	Under 5 5 upwards	...	9 22	5 15	...	1 6	...	...	...	...	...	...	8 20	...	





## Ware Rural District Council.

HERTFORD, HERTS,

*January 30th, 1898*

### Annual Report of the Medical Officer of Health.

#### Population.

The population (exclusive of Hoddesdon), estimated to the middle of 1897, was 10,487.

The Birth Rate was	20	per 1,000 of the population.
„ Death „ „	10·6	„ „ „
Zymotic Death Rate was	·7	„ „ „
Phthisis „ „	·85	„ „ „
Other Lung Diseases	1·5	„ „ „
Cancer	·85	„ „ „
Infant Mortality	71·4	„ „ births.

#### Deaths from Infectious Disease.

There were eight deaths from Infectious Disease, viz. :—

Typhoid Fever	...	Broxbourne	...	1
Scarlet Fever	...	Great Munden	...	1
„ „	...	Standon	...	2
Diphtheria	...	Standon	...	1
Erysipelas	...	Great Munden	...	1
Measles	...	Little Munden	...	1
„	...	Standon	...	1
Total	...	...	...	8

#### Notification of Infectious Disease.

Thirty-five cases of Infectious Disease were notified, viz. :—

Scarlet Fever	...	Hunsdon	...	1
„ „	...	Great Munden	...	3
„ „	...	Puckeridge (Standon)	...	4
„ „	..	Hertford Heath	...	2
„ „	...	Widford	...	1
„ „	...	Wormley	...	2
„ „	...	Standon	...	1
„ „	...	Wareside	...	1
„ „	...	Broxbourne	...	1
Diphtheria	...	Hunsdon	...	1
„	...	Great Munden	...	1
„	...	Old Hall Green (Standon)	...	4
„	...	St. Margarets	...	1
„	...	Haileybury	...	4
„	...	Great Amwell	...	1
„	...	Widbury	...	1

Typhoid Fever	...	Broxbourne	...	...	1
Erysipelas	...	Great Munden	...	...	1
„	...	Old Hall Green (Standon)	...	...	2
„	...	Wormley	...	...	1
„	...	Wareside	...	...	1
Total					35

### Measles.

Measles occurred in many villages, and schools were closed at Great Munden and Little Munden.

### Reports.

During the year I have had occasion to report to you on matters in connection with Puckeridge, Old Hall Green, Leven's Green, Standon, Widford, Hunsdon, Rye House, Stanstead Abbots, and Great Amwell.

I have included in this report a short sketch of the condition of each village in the District, with reference to Water Supply, Drainage, Refuse Disposal, etc.

### Condition of the District.

GREAT AMWELL, divided into 3 portions, viz.:—1, Hertford Heath; 2, the Mount; 3, London Road, near Ware.

#### HERTFORD HEATH.

Water supply.—Shallow wells.

Drainage.—Sewer which discharges into the Little Amwell sewer; a yearly sum is paid by the Ware Authority.

Refuse disposal.—Ashes, etc., put on to gardens; a system of scavenging should be adopted.

Occupation of inhabitants.—Agricultural.

Diseases.—Scarlet Fever.

#### THE MOUNT.

Water Supply.—From New River well.

Drainage.—Sewer attended to privately.

Refuse disposal.—Some earth pails emptied by occupiers.

#### LONDON ROAD, WARE.

Water Supply.—Ware water main, some wells.

Drainage.—Into Ware sewer (slop water).

Disposal of Refuse.—Earth closets, emptied by occupiers. Old privy pits have just been abolished and earth closets substituted. Cowshed, drained and kept clean.

## BROXBOURNE.

Water Supply.—Wells, some few connections to water main.

Drainage.—Sewer discharging on to Sewage Farm, some earth closets.

Refuse disposal.—Ashes, etc., emptied by occupiers ; should be a system of scavenging.

Occupation of inhabitants.—Residential, agricultural and railway men.

Diseases.—Scarlet Fever and Typhoid Fever (1 case).

Sanitary improvements required.—More connections with the water main.

Sanitary improvements carried out.—Great improvement has been made to Park Lane sewer by constructing a flushing chamber and erecting a ventilating shaft.

Cowsheds kept in fair condition.

## EASTWICK, small village.

Water Supply.—By tap from spring belonging to Mr Bowlby.

Refuse disposal.—By occupiers. Closets, mostly privy pits close to the houses.

Occupation of inhabitants.—Agricultural.

Sanitary improvements necessary.—The conversion of the privy pits into earth closets.

## GILSTON.

Water Supply.—From wells.

Drainage.—Into ditch, some cesspits.

Refuse disposal.—Removed by occupiers. Closet accommodation, partly buckets, some privy pits.

Sanitary improvements carried out.—Converting some privies into pail closets.

## HUNSDON.

Water supply.—Parish pump.

Drainage.—Sewer for slop water, which discharges into a filter, and has effluent into ditch.

Refuse disposal.—Ashes, etc., emptied by occupiers. Closets, the greater part earth closets.

Disease.—1 case of Scarlet Fever, 1 Diphtheria.

Sanitary improvements required.—Houses to be disconnected from the storm water drain and put into the sewer ; that means of flushing and ventilation be provided ; privy pits abolished, and some dilapidated houses closed.

Cowsheds.—Good.

The work of improving the drainage has commenced.

**GREAT MUNDEN**, a straggling parish of generally poor class of cottages.

Water supply.—Wells and springs.

Drainage.—Into ditch.

Refuse disposal.—By occupiers.

Occupation of inhabitants.—Agricultural.

Closets.—The greater part pails, emptied by occupiers.

Disease.—3 cases Scarlet Fever, 1 Diphtheria, 1 Erysipelas.

Sanitary improvements required.—A better class of cottages with modern sanitation.

Improvements carried out.—At Leven's Green and Nasty, where cottages have been repaired, cleaned and lime washed.

The water supply at Stockholds is very bad.

#### **LITTLE MUNDEN.**

Water supply.—Deep wells (public).

Drainage.—None.

Refuse disposal.—Earth closets emptied by occupiers, some few privy pits.

Occupation of inhabitants —Agricultural.

Cowsheds.—Kept clean.

Sanitary improvements necessary.—The drainage of some premises.

**HAULTWICK**, lying between Great Munden and Little Munden, has a deep well.

#### **ST. MARGARETS.**

Water supply.—Wells.

Drainage.—Cesspits.

Refuse disposal.—Earth closets emptied by occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—1 case Diphtheria.

Cowsheds and Dairies.—Very good.

This is a very clean little parish, and the cottages are generally of a more modern type than some of the parishes.

**STANDON** includes part of Puckeridge, Colliers End, High Cross, and Wadesmill.

#### **STANDON.**

Water supply.—Wells.

Drainage.—Cesspits, some into ditches.

Refuse disposal.—Pail closets, generally emptied by occupiers, some privy pits.

Occupation of inhabitants.—Agricultural.

An improvement would be made by pulling down some very old cottages near the mill.



## PUCKERIDGE.

Water supply.—Wells.

Drainage.—Storm water drain which discharges into ditches.

Refuse disposal.—Privy pits and pail closets, emptied by occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—4 cases Scarlet Fever.

The sanitary arrangements of some of the houses have been improved, and some privy pits turned into earth closets. Much more needs to be done, and some system of scavenging introduced.

The drainage is very unsatisfactory.

A committee has been formed, that met to consider the drainage question; the matter is still under consideration.

## COLLIERS END.

Water supply.—Wells.

Drainage.—Into ditch.

Refuse disposal.—Pail closets emptied by occupiers, some few privy pits.

This portion of Standon has cottages of a very poor class.

## HIGH CROSS.

Water supply.—Deep well.

Drainage.—Into ditch.

Refuse disposal.—Pail closets emptied by occupiers.

The cottages here are of a very inferior class.

## OLD HALL GREEN.

St. Edmund's College, drained into cesspits, together with cottages belonging to the College.

## HUGHES GREEN.

Water supply.—From spring.

Drainage.—None.

Refuse disposal.—Pails emptied by occupiers.

A water supply has been wanted here for a very long time.

## WADESMILL.

Water supply.—Wells.

Drainage.—Unknown.

Refuse disposal.—Pail closets, emptied by scavenger paid by Authority.

## STANSTEAD ABBOTTS.

Water supply.—Wells. (?)

Drainage.—Old sewer which has been condemned. A new sewer has been laid, but no connections are made. The laying of this new sewer has not been a success so far. The old sewer discharges sewage into a tank, from which it is pumped to the Sewage Farm by means of steam pumps.

Refuse disposal.—Ashes and the contents of some earth closets emptied on to gardens by the occupiers. A system of scavenging is needed, as in some cases there are no gardens, and then ashes are thrown in heaps in small back yards.

The house connections with the present sewer are generally bad. In some cases the pipes are not covered with earth. Very few are ventilated, and less intercepted from the sewer. Every connection must be tested before joining the new sewer.

The kerbing and channelling in the High Street, especially near the Pied Bull, is bad. Stale water and urine from horses collects and becomes offensive. The matter has been before the County Council, but at present no steps have been taken to remedy the evil.

A horse slaughterer has premises in the village, but conducts the business without nuisance generally. Frequent inspections are made here.

A large heap of very foul manure, consisting of offal from butchers' and fishmongers' premises, was deposited on the river bank during the summer; complaints were made, and the matter was reported on. The cargo came by boat from London.

Pleasure garden at Rye House.

Drain runs directly into a ditch which communicates with the River Lea, and from which the East London Water Company pump for supplying part of London. The sanitary arrangements at Rye House are in a most deplorable condition. The number of visitors on Bank Holidays amounts to several thousands.

## THUNDRIDGE.

Water supply.—From wells.

Drainage.—Sewer discharging on to meadow.

Refuse disposal.—Earth pails, emptied by man employed by the Council.

Occupation of inhabitants.—Agricultural.

Improvements required.—More and better cottages, and the abolition of the old ones. Cowsheds.—Bad.

Improvements carried out.—Cottages improved somewhat.



WARESIDE, a straggling village in Ware Rural.

Water supply.—From wells. Water scarce on the higher ground near Buckney Wood.

Drainage.—Privy pits, some few earth pails emptied by occupiers.

Occupation of inhabitants.—Agricultural.

Appended to this report will be found the mortality and sickness tables, as required by the Local Government Board, also the inspector's report for the year.

### Inspector's Report for 1897.

No. of complaints	...	...	...	...	...	23
No. of houses inspected	...	...	...	...	...	300
No. of certificates of habitation given	...	...	...	...	...	26
Plans submitted and approved	...	...	...	...	...	21
Water from main supplied to houses	...	...	...	...	...	20
Tube wells driven for old cottages	...	...	...	...	...	3
Ditto new cottages	...	...	...	...	...	3
Deep wells made	...	...	...	...	...	2
Water samples sent for analysis	...	...	...	...	...	2
Cowsheds inspected	...	...	...	...	...	8
Slaughter houses inspected	...	...	...	...	...	9
Bakehouses inspected	...	...	...	...	...	13
Overcrowding abated	...	...	...	...	...	5
Sinks disconnected	...	...	...	...	...	12
Damp houses put in repair	...	...	...	...	...	8
Pigs a nuisance, removed	...	...	...	...	...	3
Foul deposits removed	...	...	...	...	...	10
Foul pond cleaned	...	...	...	...	...	2
Privies converted into earth closets	...	...	...	...	...	46
Defective drainage re-laid	...	...	...	...	...	20
Canal boats inspected	...	...	...	...	...	46
Notices served	...	...	...	...	...	29
Notices complied with	...	...	...	...	...	25
Scarlet fever cases (2 fatal)	...	...	...	...	...	15
Diphtheria	...	...	...	...	...	7
Typhoid (fatal)	...	...	...	...	...	1
Houses disinfected	...	...	...	...	...	19
Houses cleansed, limewhited and repaired	...	...	...	...	...	13
Compensation for articles destroyed after cases of infectious disease	...	...	...	...	...	2

Sewers have been regularly and properly flushed, and the sewage disposed of without creating a nuisance.

Taps and water fittings have been periodically inspected, and necessary repairs attended to.



**(A) TABLE OF DEATHS during the Year 1897, in the WARE RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																			
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
WORMLEY ... ..	13	4	2		1	2	4	Under 5										1								5	6
								5 upwds.													2	4				1	7
BROXBOURNE ..	10		1			6	3	Under 5						1						1	1	2	1			1	9
								5 upwds.																		3	1
GREAT AMWELL ...	19	3	3		1	5	7	Under 5										1								5	6
								5 upwds.												1		2	1	2		7	13
STANSTEAD ABBOTTS	16	2	1	1		6	6	Under 5										1			1					1	3
								5 upwds.												1	1	4	1	1		5	13
HUNSDON ... ..	7	2			1	3	1	Under 5													1					1	2
								5 upwds.												2				1		2	5
EASTWICK ... ..	1						1	Under 5																			
								5 upwds.																		1	1
GILSTON...	1					1		Under 5													1					1	1
								5 upwds.																			
WIDFORD ... ..	7	1		1		2	3	Under 5													1						1
								5 upwds.												2			2			2	6
LITTLE MUNDON ...	6		1			1	4	Under 5								1											1
								5 upwds.														3	1			1	5
GREAT MUNDON ...	4	1	3					Under 5		1					1											2	4
								5 upwds.																			
STANDON AND PUCKERIDGE...	28	2	3	2		10	11	Under 5		1						1								1	2	5	
								5 upwds.		1	1										6	2	3	2	8	23	
TOTALS ... ..	112	15	14	4	3	36	40	Under 5		2					1	2		3			3			1	17	29	
								5 upwds.		1	1			1						9	13	13	9	6	30	83	



**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the WARE RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Typhus.	Erysipelas.	Measles.	Scarlatina.	Diphtheria.	Enteric Typhoid Fever.
								Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.							
HUNSDON ... ..	532	...	17	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	...
GREAT MUNDON ... ..	476	...	10	Under 5 5 upwards	...	2	1	...	...	...	...	...	...	...	1	...	2	...
STANDON ... ..	...	...	...	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	1	...	...
PUCKERIDGE .. ...	2153	...	57	Under 5 5 upwards	...	2	2	...	...	...	...	...	...	...	...	...	...	...
OLD HALL GREEN ... ..	...	...	...	Under 5 5 upwards	...	...	4	...	...	...	...	...	...	2	...	...	...	...
GREAT AMWELL ... ..	...	...	...	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	...
HERTFORD HEATH.. ..	1975	...	22	Under 5 5 upwards	...	1	1	...	...	...	...	...	...	...	...	1	...	...
WIDFORD... ..	461	...	12	Under 5 5 upwards	...	1	...	...	...	...	...	...	...	...	...	1	...	...
ST. MARGARETS ... ..	139	...	6	Under 5 5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	...	...
WORMLEY ... ..	871	...	30	Under 5 5 upwards	...	2	...	...	...	...	...	...	...	1	...	2	...	...
HAILEYBURY ... ..	...	...	...	Under 5 5 upwards	...	...	4	...	...	...	...	...	...	...	...	...	...	...
WARESIDE ... ..	450	...	...	Under 5 5 upwards	...	1	...	...	...	...	...	...	...	1	...	...	...	...
BROXBOURNE ... ..	776	...	9	Under 5 5 upwards	...	1	...	...	1	...	...	...	...	...	...	...	...	...
STANSTEAD ... ..	1322	...	23	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
EASTWICK ... ..	71	...	2	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GILSTON .. ...	260	...	9	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
THUNDRIDGE ... ..	450	...	...	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
LITTLE MUNDON ... ..	378	...	13	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS ... ..	10487	210	...	Under 5 5 upwards	...	5 11	1 11	...	...	1	...	...	...	5	...	3 7	...	...





# Buntingford Rural District Council.

HERTFORD, HERTS,

*January 25th, 1898.*

## Annual Report for 1897.

### Population.

The population estimated to the middle of 1897 was 5,439.

The Birth rate was : 21·6 per 1,000 of the population.

„ Death „ „	15·07	„	„	„
Zymotic Death Rate was	1·1	„	„	„
Phthisis „ „	·9	„	„	„
Other Lung Diseases	1·6	„	„	„
Cancer	·7	„	„	„
Infant Mortality	110·1	„	„	Births.

### Deaths from Infectious Disease.

2 Deaths occurred from Scarlet Fever at Anstey.

1	„	„	„	Whooping Cough at Great Hormead.
1	„	„	„	Diphtheria at Sandon.
2	„	„	„	Measles „

### Notification of Infectious Disease.

33 cases of Infectious Disease were notified, viz. :—

Scarlet Fever	...	Buntingford	...	23
„ „	...	Union Workhouse	...	3
„ „	...	Anstey	...	2
„ „	..	Buckland	...	1
„ „	...	Westmill	...	1
Diphtheria	...	Buntingford	...	1
Typhoid Fever	...	Buntingford	...	1
„ „	...	Buckland	...	1

—  
33

I reported to you during the year on :—

Water Supply at Buntingford, Sandon, Wallington.

Drainage at Cottered, Wallington, Westmill, and Buntingford  
Scarlet Fever and Diphtheria.

The necessity of providing Hospital accommodation.

I have included the substance of these reports in the report for the whole of the combined districts, also a short sketch of the condition of each village in the district, referring to the drainage, water supply, refuse disposal, etc.

## Condition of the Districts

### ARDELEY.

Water supply.—From wells and ponds.

Refuse disposal.—By occupiers.

Drainage.—Into ditch.

Occupation of inhabitants.—Agricultural.

### ANSTEY.

Water supply.—Public wells and ponds.

Drainage.—Into ditch.

Refuse Disposal.—By occupiers.

Occupation of inhabitants —Agricultural.

Disease.—2 cases of Scarlet Fever.

### ASPENDEN.

Water supply.—From wells.

Drainage.—Into ditch.

Refuse disposal.—By occupiers.

Occupation of inhabitants.—Agricultural.

### BROADFIELD.

Water supply.—From wells.

Drainage.—Into ditch.

Refuse disposal.—By occupiers.

Occupation of inhabitants.—Agricultural.

### BUCKLAND.

Water supply.—From wells.

Drainage.—Into ditch.

Disposal of refuse.—By occupiers.

Occupation of inhabitants.—Agricultural.

Disease.—1 case of typhoid fever.

### BUNTINGFORD.

Water supply.—From wells ; very unsatisfactory, should be a proper supply (see water supply).

Drainage.—Public sewer delivering on to land.

Disposal of refuse.—Vaults emptied by occupiers.

Disease.—23 cases of scarlet fever, 1 diphtheria, 1 typhoid fever.

### COTTERED.

Water supply.—Public well.

Drainage.—Into ditch.

Disposal of refuse.—By occupiers.

Occupation of inhabitants.—Agricultural.

## GREAT HORMEAD.

Water supply.—Wells.  
 Drainage.—Into ditch.  
 Disposal of refuse.—By occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—Whooping cough.

## LITTLE HORMEAD.

Water supply.—Public wells.  
 Drainage.—Into ditch.  
 Disposal of refuse.—By occupiers.  
 Occupation of inhabitants.—Agricultural.

## MEESDEN.

Water supply.—From wells and ponds.  
 Drainage.—Into ditch.  
 Disposal of refuse.—By occupiers.  
 Occupation of inhabitants.—Agricultural.

## RUSHDEN.

Water supply.—From wells.  
 Drainage.—Into ditch.  
 Refuse disposal.—By occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—Measles.

## SANDON.

Water supply.—Wells and ponds ; an uncovered shallow well existed unprotected ; I reported on this, and the well has been covered and a pump fixed.  
 Drainage.—Into ditch.  
 Refuse disposal.—By occupiers.  
 Occupation of inhabitants.—Agricultural.  
 Disease.—Measles.

## THROCKING.

Water supply.—Wells.  
 Drainage.—Into ditch.  
 Refuse disposal.—By occupiers.  
 Occupation of inhabitants.—Agricultural.

## WALLINGTON.

Water supply ; this is very unsatisfactory, the water runs down by the road side, and is obtained by dipping it from holes ; a spring carried into village by pipe, the pipe is not broken.

Drainage.—Into ditch.

Refuse disposal.—By occupiers.

Occupation of inhabitants.—Agricultural.

## WESTMILL.

Water supply.—Wells.

Drainage. —Partly drained into cesspools.

Disposal of refuse.—Vaults emptied by occupiers.

Occupation of inhabitants.—Agricultural.

Disease. —I case of scarlet fever.

## WYDDIAL.

Water supply.—From wells.

Drainage.—Into ditch.

Refuse disposal.—By occupiers.

Occupation of inhabitants.—Agricultural.

---

**Summary of Work done through the Sanitary Inspector in the Buntingford Rural District during the year ending December 31st, 1897.**

	Total Number for Year.	Results of Inspection, &c.
Nuisances abated ... ..	69	
Notices served ... ..	63	
Houses disinfected ... ..	14	
Overcrowding abated ... ..	1	
Houses placed in habitable repair ...	17	
Houses closed ... ..	2	
Wells sunk or improved supplies of water afforded ... ..	5	
Wells cleansed or repaired ... ..	3	
Wells closed ... ..	2	
Houses connected with sewers... ..	2	
Earth, pail, or improved Privies con- structed or existing Privies altered .	10	
Privies and W.C.'s repaired ; W.C.'s supplied with water ... ..	14	
Cisterns cleansed, repaired, or covered	3	
Animals improperly kept removed ...	6	
Samples of water taken for Analysis ...	3	
Compensation paid for destruction of infected bedding ... ..	2	

(Signed) *ERNEST G. THODY,*

*Inspector of Nuisances.*





**(A) TABLE OF DEATHS during the Year 1897, in the BUNTINGFORD RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.		
LITTLE HORMEAD ..	1	..	..	1	..	..	..	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	
GREAT HORMEAD ...	6	2	..	..	..	3	1	Under 5 5 upwds.	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	3	2	
MEESEN ..	4	1	..	..	..	1	2	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	3	
ANSTEY ...	5	1	2	1	..	1	..	Under 5 5 upwds.	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	3	2	
WYDDIAL ..	5	..	..	1	..	1	3	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	1	5	..	
BUCKLAND ...	6	2	..	..	..	1	3	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	2	4	
LAYSTON ..	9	1	1	..	1	1	5	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	5	2	7	
ASPENDEN ..	11	3	1	..	..	3	4	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	4	4	7	
ARDELEY ...	4	1	..	..	1	1	1	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	1	3	
WESTMILL ..	4	..	1	..	1	1	1	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	3	
COTTERED ...	7	..	..	..	..	3	4	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	4	7	..	
WALLINGTON ...	2	..	..	..	..	1	1	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	..	
SANDON ...	8	1	3	2	..	..	2	Under 5 5 upwds.	..	..	1	..	..	..	..	1	1	..	..	..	1	1	..	..	2	4	4	
UNION WORKHOUSE	10	1	..	..	1	1	7	Under 5 5 upwds.	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	1	9	
TOTALS ..	82	13	8	5	4	18	34	Under 5 5 upwds.	..	1	1	..	..	..	..	1	1	..	..	5	1	8	7	4	2	16	21	61



(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the BUNTINGFORD RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

[illegible]



## Hadham Rural District Council.

HERTFORD, HERTS,

*February 10th, 1898.*

### Annual Report of the Medical Officer of Health, for 1897.

GENTLEMEN,

I now present to you my first Annual Report on the health of your District.

#### Population.

The population of the district, estimated to the middle of 1897, was 8491.

The Birth Rate was 25·7 per 1,000 of the population.

„ Death „	13·6	„	„	„
Zymotic „	1·8	„	„	„
Phthisis „	1·06	„	„	„
Other Lung Diseases	1·6	„	„	„
Cancer	·58	„	„	„
Infant Mortality	91·3	„	„	births.

These figures compare favourably with those of England and Wales, but the Mortality statistics are slightly higher than the rates for the whole combined districts.

#### Deaths from Infectious Disease.

Sixteen deaths occurred from Infectious Disease, viz, :—

Diphtheria	...	Sawbridgeworth (2 in Hospital)	3
Scarlet Fever	...	Furneux Pelham	1
Whooping Cough	...	Great Hadham	6
„	„	Little Hadham	1
„	„	Albury	2
„	„	Furneux Pelham	1
Typhoid Fever	...	Sawbridgeworth	1
„	„	Albury	1

---

Total 16

### Notification of Infectious Disease.

Fifty-five cases of Infectious Disease were notified, viz. :—

Scarlet Fever	...	Sawbridgeworth ..	...	1
„	„	Great Hadham ...	...	26
„	„	Little Hadham ..	...	1
„	„	Braughing ...	...	4
„	„	Furneux Pelham ...	...	1
„	„	Brent Pelham ...	...	6
Diphtheria	...	Sawbridgeworth ...	...	7
„	...	Little Hadham ...	...	1
Typhoid Fever	...	Albury ...	...	2
„	„	High Wych ...	...	1
Erysipelas	...	Great Hadham ...	...	1
„	...	Braughing ..	...	2
„	...	Furneux Pelham ...	...	1
„	...	Stocking Pelham ...	...	1

#### Diphtheria.

The outbreak at Sawbridgeworth was a continuance of that of the previous year, and ended in January, previous to my taking up office.

Out of 7 cases notified, 6 were removed to Hospital, 2 died in Hospital and 1 at home.

#### Scarlet Fever.

Twenty-five cases of Searlet Fever have been notified at Great Hadham, the first case was notified on Feb. 21, 1897, and was removed to Hospital.

During March 11 cases occurred, 3 of which were removed to Hospital.

No case occurred from 5th April until 7th October, when the disease reappeared having been brought into the village from the seaside.

When a case is notified it is removed as soon as possible to the Hospital, the clothes and bedding are disinfected, also the house.

The schools have been closed during the year and have been disinfected and cleaned on two occasions.

During the last three months odd cases of Scarlet Fever have been appearing at intervals of some weeks.

It is possible that a mild case has existed which has been unrecognised, and is thus the means of spreading the disease.

I have made enquiries in this direction, but it is difficult to get accurate information.



The mortality from Phthisis and other Lung Diseases was above the average, Whooping Cough being responsible for 7 deaths.

### Condition of the District.

#### GREAT HADHAM.

Water supply.—From shallow wells.

Drainage.—Into sewer with outfall into a sewage farm which is under the supervision of the Surveyor ; the sewers are flushed regularly. The W.Cs. have no proper system of flushing.

Refuse disposal.—The refuse is removed by the occupiers ; earth closets, W.Cs., and privies.

#### LITTLE HADHAM.

Water supply.—Shallow wells and springs.

Drainage.—No system, into ditches.

Refuse disposal.—Removed by occupiers.

#### ALBURY.

Water supply. —Shallow wells and dipping holes.

Drainage.—No system, into ditches.

Refuse disposal.—Pits and pails, removed by occupiers.

#### BRENT PELHAM, FURNEUX PELHAM, STOCKING PELHAM.

Water supply.—Shallow wells.

Drainage.—None.

Refuse disposal.—By occupiers.

#### SAWBRIDGEWORTH, a large village.

Water supply.—From Essex Water Works Co.

Drainage.—Into sewers, with an outfall on to a sewage farm, which is under the supervision of the Surveyor.

Refuse disposal. — Few W.Cs., earth closets, privy pits, emptied by occupiers. I would suggest that a system of scavenging be adopted here, and that the privy pits be abolished.

#### THORLEY.

Water supply.—From wells.

Drainage.—None, into ditches.

Refuse disposal.—By occupiers.

#### BRAUGHING.

Water supply.—From shallow wells and springs.

Drainage.—Into ditches.

Refuse disposal. — Earth closets and privies emptied by occupiers.

Sanitary improvements required.—That part of Braughing in Standon parish, formed a subject of a report to your Council ; a Committee was formed of members of the Hadham Rural and Ware Rural District Councils, to inspect the village and report.

The Committee met several times, and discussed the question which is now under consideration.

I made the following suggestions for the improvement of the Parish :—

1. That all privy vaults be abolished and pail closets substituted, and a scavenger appointed to regularly empty the same, and deposit the contents at a suitable spot out of the village.
2. That ash-bins be provided.
3. That all sink drains be disconnected.
4. That all drains and sewers be properly trapped and ventilated.
5. That overflows from cess-pits be disconnected from the sewer.
6. That some system of disposal of the sewage be adopted other than that of allowing the sewage to discharge into ditches in the village.

#### PATMORE HEATH.

Water supply.—The chief supply is from three shallow wells on the heath.

The first is a well about 4 feet deep and open at the top, although partly covered by a defective door.

The second well is of the same sort, but larger and bricked round outside with open bricks, and covered on the top with doors.

The third is a well with a pump, this water is black and stinking.

On the Heath there are several ponds and marshy places holding water, which no doubt feeds these wells.

The two wells which are in use on the Heath are liable to pollution at any time.

Some of the cottages have no water supply at all, while others have shallow dip wells in constant danger of pollution.

I would advise that a better supply of water be provided by sinking one or two deep wells in suitable spots, and properly protecting them and fixing pumps some distance away.

#### COWPASTURE, ALBURY.

Some cottages here derive their water supply from a catch-pit about two feet deep, and a quarter of a mile from the houses ; this is in danger of pollution, and should be deepened and properly protected and a pump fixed.

---

**Summary of Work done through the Sanitary Inspector in the  
Hadham District Council during the Year ending December  
31st, 1897.**

	Total Number for Year.	Results of Inspection, &c.
Nuisances detected ... ..	340	
Nuisances abated ... ..	290	
Notices served ... ..	15	
Summonses taken out ... ..	1	Sawbridgeworth.
Convictions ... ..	1	Sawbridgeworth.
Cottages inspected ... ..	630	House to house inspection.
Slaughter-houses inspected ... ..	8	35 inspections during the year.
Cowsheds inspected ... ..	10	20 inspections during the year.
Houses disinfected ... ..	45	Bedding and clothing.
Schools disinfected ... ..	5	
Overcrowding abated ... ..	2	
Houses placed in habitable repair ...	6	
Houses erected or re-built, for which "Certificates" were applied ...	4	
Plans approved by the Council ...	10	
"Certificates" granted... ..	4	
"Certificates" deferred ... ..	1	Work in hand but not completed on the 31st December.
Wells cleansed or repaired ... ..	7	
Wells closed ... ..	1	Little Hadham.
Houses connected with sewers ...	9	Sawbridgeworth.
Infant School connected with sewers...	1	Great Hadham.
Houses connected with water mains ...	10	Sawbridgeworth.
Earth, pail, or improved Privies con- structed or existing Privies altered ...	26	
Samples of water taken for analysis ...	7	Patmore Heath, 3 samples. Saw- bridgeworth 3 samples. Thorley 1 sample.
Barges inspected ... ..	15	Sawbridgeworth. All found to be very satisfactory.

N.B.—In consequence of the Diphtheria at High Wych, Sawbridgeworth, the Council have provided a sewer for the disposal of the slop water, etc., at a cost of about £130.

*Signed E. T. WATTS.*

**(A) TABLE OF DEATHS during the Year 1897, in the HADHAM RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
THORLEY ... ..	5	1	...	...	...	3	1	Under 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	1	1
SAWBRIDGEWORTH	29	5	1	...	3	12	5	Under 5 upwds.	...	...	1	...	...	1	...	...	...	...	...	...	3	6	4	2	...	5	6	23
FARNHAM .. ..	7	...	...	...	...	4	3	Under 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	6	7
GREAT HADHAM ...	20	6	2	2	1	3	6	Under 5 upwds.	...	...	...	...	...	...	...	...	...	5	1	...	...	...	...	...	...	2	8	12
LITTLE HADHAM ...	12	2	1	1	...	5	3	Under 5 upwds.	...	...	...	...	...	...	...	...	...	1	...	...	3	1	...	1	1	3	9	3
ALBURY ... ..	10	2	4	...	...	2	2	Under 5 upwds.	...	...	...	...	...	1	...	...	...	2	...	...	...	2	...	...	...	2	6	4
BRAUGHING .. ..	15	2	...	1	1	4	7	Under 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	1	2	6	13	2
FURNEAUX PELHAM	14	2	1	2	1	2	6	Under 5 upwds.	...	1	...	...	...	...	...	...	...	1	1	...	...	...	4	...	...	2	3	11
STOCKING PELHAM	4	...	1	...	...	1	2	Under 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	3	1
TOTALS ... ..	116	20	10	6	6	36	38	Under 5 upwds.	...	1	1	...	...	2	...	...	...	8	1	...	9	3	10	15	5	5	18	30







(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the HADHAM RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.			
	Last Census.	Estimated to middle of 1897.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	FEVERS.					Erysipelas.	Measles.	Scarlatina.	Diphtheria.	Enteric or Typhoid Fever.
										Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
THORLEY ...	546	546	15	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
SAWBRIDGEWORTH ...	3025	3025	82	Under 5 5 upwards	...	1	2	...	...	...	...	...	...	...	...	...	...	...	
GREAT HADHAM ...	1274	1274	40	Under 5 5 upwards	...	4	...	...	...	...	...	...	...	...	1	...	...	...	
LITTLE HADHAM ..	733	733	14	Under 5 5 upwards	...	1	1	...	...	...	...	...	...	...	...	...	...	...	
FARNHAM ..	477	477	12	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
ALBURY ...	563	563	9	Under 5 5 upwards	...	...	...	...	...	2	...	...	...	...	...	...	...	...	
BRAUGHING ..	974	974	30	Under 5 5 upwards	...	4	...	...	...	...	...	...	...	...	2	...	...	...	
FURNEAUX PELHAM	540	540	12	Under 5 5 upwards	...	1	...	...	...	...	...	...	...	...	1	...	...	...	
BRENT PELHAM ...	215	215	2	Under 5 5 upwards	...	2	4	...	...	...	...	...	...	...	...	...	...	...	
STOCKING PELHAM ...	144	144	3	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	1	...	...	...	
HIGH WYCH ..	...	...	...	Under 5 5 upwards	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
TOTALS ...	8491	8491	219	Under 5 5 upwards	...	7 32	2 6	...	...	3	...	...	...	...	5	...	...	...	



# Stansted Rural District Council.

HERTFORD, HERTS,

*February 1st, 1898.*

## Annual Report of the Medical Officer of Health for 1897.

### Population.

I have estimated the population at the middle of 1897, to be 8481.

The Birth Rate was	23·9	per 1000	of the population.
„ Death „ „	10·7	„	„ „
Zymotic Death Rate was	1·3	„	„ „
Phthisis	·3	„	„ „
Other Lung Diseases	1·3	„	„ „
Cancer	·4	„	„ „
Infant Mortality	90·8	„	„ births.

The Zymotic Death rate is higher owing to the outbreak of Diphtheria at Little Hallingbury early in the year.

The other figures are very satisfactory.

### Deaths from Infectious Disease.

There were six deaths from infectious disease, viz. :—

Diphtheria	...	Little Hallingbury	...	4
Typhoid Fever	...	Ugley...	..	1
Puerperal Fever	...	Birchanger	..	1

### Notification of Infectious Disease.

There were 24 notifications of infectious disease, viz. :—

Diphtheria	...	Little Hallingbury	...	15
„	...	Stansted	..	3
Puerperal Fever	...	Birchanger	...	1
Erysipelas	...	Birchanger	...	2
„	...	Henham	...	1
„	...	Ugley	...	1
„	...	Manuden	...	1
Total				24

The outbreak of Diphtheria at Little Hallingbury began on January 20th ; 5 children were removed to hospital, from a house where the disease had appeared in the previous month, these children were treated in hospital, where one died, and the others returned home at the beginning of March.

On June 5th the disease re-appeared, and during June and July 10 other children were removed to hospital suffering from Diphtheria.

I have made several reports to you on this outbreak, and I include in this report details of the action taken, and my opinion as to the cause of the outbreak.

#### **Outbreak of Diphtheria at Little Hallingbury. June 28th, 1897.**

During the past month eight cases of Diphtheria have been notified here.

On June 5th, a child named Living, died of a throat affection, at his house in Little Hallingbury; on the same day, two other children were removed to hospital from the same house, suffering from Diphtheria.

On June 6th (next day) another child was removed from the same house.

On June 7th, two children named Potter, were removed to the Hospital suffering from Diphtheria.

On June 11th, a child named Reynolds (Gaston Green), was removed to Hospital, also a child named Bayford, on the Lower Road.

On June 24th, a child named Eldred (near Bayford's) was removed.

On June 8th and 25th, I visited Hallingbury and inspected the houses where the cases had occurred.

The school was closed, and has been disinfected, cleaned, and painted.

Eight cases then have been notified, and four deaths have occurred, including the child Living, who died at home before notification.

I have made inquiries as to the existence of Diphtheria in this village on previous occasions, and report to you thereon.

In 1885 a serious outbreak appeared, 50 cases occurred, with 16 deaths.

From what I can gather, the cause of the outbreak at that time, was supposed to be due to the children drinking the water from the brook, which may have been polluted with excretions from patients suffering from Diphtheria in a neighbouring village.

The present outbreak is due to the existence in the neighbourhood, of cases of Diphtheria.

Cases of this disease, I am informed, have occurred lately in the adjoining village of Hatfield Heath, outside the District.



Cases also have occurred in Little Hallingbury in February of this year.

Mrs. Bridgeman and family came home from Hospital, where they had been sent, suffering from Diphtheria, on February 13th, 1897, or nearly four months previous to the death of Living's child on June 5th ; one of Bridgeman's children died in Hospital.

This was before I came into office as Medical Officer of Health.

Now, although a long time has elapsed between the return of family and the re-appearance of the disease, it shows that the disease was present in the village.

In 1885, when the outbreak occurred, most of the inhabitants obtained their water from the brook, since then some wells have been provided, but still there are some houses without any proper supply.

At Bayford's, where a case occurred in 1885, and also this month, the water is from a shallow dip well about 9 feet deep.

At Eldred's, and three houses adjoining, where a case occurred this month, there is no water supply, the inhabitants having to fetch it from the brook, which is polluted.

Most of the other houses obtain their water from a spring at the bottom of the hill, this spring runs into a tank which is covered over, and a pump fixed.

All the water then is sub-soil water, or shallow springs.

I have analysed the water from this spring and find,—That it is within the limits allowed for use.

Bad water, *per se*, will not cause Diphtheria, but at the same time, drinking polluted water impairs the constitution of those drinking it and renders them more susceptible to the attack of specific disease.

The presence of decomposing refuse, overcrowding and damp houses, also assist largely in fostering the germ of Diphtheria.

When the disease has occurred in a village, it will always recur, when these insanitary conditions are allowed to exist.

The precautions I advise to be taken with regard to this village are :—

1. The removal of soil from around the houses.
2. The removal of all animal or vegetable refuse from around the houses.
3. The regular attention to the cleaning and disinfection of the closets. In very few houses do any drains exist, the slops being thrown on the gardens.
4. An inquiry into the water supply.



### Milk.

Diphtheria may be carried by milk, when the special germ gains access to it.

I have made inquiries into the milk supply, but find that few if any of the children are accustomed to drink milk.

### School Drainage.

I visited the village on July 7th, 1897, and inspected the School drainage.

The surface water has been leaking into the well.

The drain from the urinal was blocked.

A new drain (partly) is being laid, but without any fall.

This drain discharges into a cess-pit about 40 feet from the well, and 8 feet deep, this cess-pit was full, probably an accumulation of years.

This drain also receives the water from the pump, which waste drain was right on top of the well, and incompletely trapped.

The drain from the yard I presume discharges into this drain and ultimately into the cess-pit, but this I could not make out.

If all the drains are like the sample which has been exposed I do not wonder at them becoming blocked or even backing into the well.

The accumulation of refuse and night soil, which I told the schoolmaster at our first visit, ought not to remain there, was still there.

The pail closets are very unsatisfactory, and should be automatic earth closets, emptied 3 times a week, away from the school premises.

The present cess-pit is too large, and if necessary to have one at all, it should have a pump fixed and ventilated, and emptied at least twice a year.

The water from the well should be pumped out and the suction pipe scraped.

The waste pipe from the drain should be some distance away from the top of the well, and properly trapped, and should not be used for slop water.

Considering that epidemics of Diphtheria and Scarlet Fever have appeared in this village on several occasions, I was rather surprised that the sanitary condition of the village is as primitive as it is, or that such defective sanitation should exist on the school premises, and that nothing had been done to improve this condition.

# ANALYTICAL REPORT on the Water from the School Well, Little Hallingbury.

*Appearances.*—Turbid with much foreign matter in suspension and much sediment.

*Smell when Heated.*—Faint.

*Chlorine.*—7·3 grains per gallon.

*Oxygen absorbed in 10 minutes at 140.*—·084.

*Free Ammonia.*—·0028.

*Albuminoid Ammonia.*—·0056.

This water contains an excess of Chlorine and organic matter, probably vegetable, also a large amount of sediment pointing to some pollution from the surface. I advise that the well is opened and examined. The water at present is unfit for drinking purposes.

During July I made several visits to the village.

The alterations in the drainage of the school have been carried out.

I analysed three samples of water.

1. From the School well, which was polluted.

1. From the cottage occupied by Mr. Bayford, which was also polluted.

1. From the Spring at the bottom of the village, which was fairly good.

The School was closed for about a month.

One fresh case of Diphtheria was notified, and removed to Hospital.

Thinking that some mild cases of Diphtheria must exist in the village, which caused the disease to continue, I decided to examine the throats of all the children in the village.

Acting on this opinion, I made an examination of the children, and as it was necessary that a Bacteriological examination should be made in order to ascertain if the Diphtheria Bacillus was present in the throat of any child, I made cultivations from all the suspicious throats.

These cultivations were Microscopically examined, and a full report made.

Had the presence of the Diphtheria Bacillus been discovered in any of the cultivations, it would have shown that some child, or children, had been attending school in an infectious condition.

It is well known that, a child may have recovered from the disease of Diphtheria, and still be capable for many weeks, of transmitting the disease.

With regard to the sanitary condition of the village, I would advise that in accordance with your recommendation concerning the privies, that these privies be abolished as soon as possible, and earth closets substituted.

In some of the cottages there is very little garden space for the disposal of the contents of the pails, which should be carried away and deposited outside the village.

### **Report on Bacteriological Examination.**

Report on the result of the Bacteriological Examination of the throats of the children attending the School.

I examined the throats of about 90 children, 74 of whom were attending school, the others were at their homes.

I took swabs of all suspicious throats, and made cultures in serum Agar, and the following is a detailed report of the result of my investigation.

The tonsils were enlarged, and in some cases congested and excoriated, and had all the appearance of having lately been the seat of some inflammatory process.

On some of them was to be seen a greyish, glairy mucous, the surface of the tonsil being rough and broken.

Within 24 hours of making the cultures from these throats, colonies of micro-organisms developed on the culture media.

I made sub-cultures of each different variety, with the following result :—

Large colonies of *Staphylococcus Aureus*.

Large white colonies of *Staphylococcus Albus*.

Smaller colonies of *Streptococcus Pyogeneus*.

Other colonies of Micro-organisms appeared, and were subjected to the same methods of examination.

It will be sufficient for the purpose if I state shortly the results arrived at.

Transferring each of these colonies to Gelatine, I was able to differentiate those liquifying and those not liquifying the gelatine.

On examining under the microscope, the characteristics of each organism were apparent.

In three cases—viz., A. and F. Bridgeman, Living and Hutchinson—white colonies, differing from the others, were to be seen ; on making sub-cultures, these presented all the cultural appearance of *Diphtheria Bacillus*.

On examining under the microscope, short rods were to be seen ; resembling the *Bacillus* of *Diphtheria*, but differing from the true pathogenic *Bacillus* in their length and shape.



The Bacillus of Diphtheria takes on various forms, according to the age and media in which it is grown, and also as to its virulence.

The result of this examination has shown that many children have been attending school with some inflammatory condition of the throat, rendering them liable to be attacked by the Diphtheria Bacillus when it comes in contact with abraded or inflamed surfaces.

The presence of Pseudo Diphtheria Bacilli in the throats of Living and Bridgeman is interesting, both of the children having had the disease within the last four months.

With regard to the other organisms found, they are the organisms which cause, or are associated with, almost every disorder of the throat which can be communicated from one person to another.

Before discharging children from Hospital, when they have been suffering from Diphtheria, the throats should be Bacteriologically examined.

The Joint Hospital Board of Hertford and Ware have provided me with a Laboratory, where I shall have every facility for making these examinations, and trust that we may be able to ascertain when a child is free from infection before leaving Hospital.

To sum up, thus :—

The throats of the children I examined showed that their condition was not a healthy one, predisposing them to an attack of Diphtheria should they come in contact with the disease.

This may be due to damp, ill ventilated, over-crowded houses, and defective sanitary arrangements.

Much can be done in improving the health of the children by attending to these insanitary conditions.

No case of true Diphtheria existed among the children whose throats I examined.

The last case was H. Jocelyn, who was removed to Hospital on the 28th July: no other case has occurred since I examined the throats.

Summary of Work done through the Sanitary Inspector in the Stansted Rural District during the year ending December 31st, 1897.

	Total Number for Year.	Results of Inspection, &c.
Complaints received ... ..	24	18 complaints the same day of offensive manure brought by Great Eastern Railway to Stansted Station.
Nuisances detected ... ..	210	
Nuisances abated ... ..	180	
Notices served ... ..	25	
Cottages inspected .. ..	630	House to house inspection in the District.
Slaughterhouses inspected ... ..	24	Inspections.
Cowsheds inspected ... ..	12	32 inspections.
Houses disinfected ... ..	13 and 4	schools.
Overcrowding abated ... ..	4	
Houses placed in habitable repair ...	10	
Houses closed ... ..	2	Great Hallingbury.
Houses erected or re-built, for which "Certificates" were applied... ..	4	
"Certificates" granted... ..	4	
Wells sunk or improved supplies of water afforded ... ..	2	
Wells cleansed or repaired ... ..	6	
Houses connected with sewers... ..	4	At Stansted with private sewer.
„ „ with water mains ...	200	Stansted new water works.
Earth, pail, or improved Privies constructed or existing Privies altered .	24	The drains have been reconstructed at Little Hallingbury School.
Samples of water taken for Analysis ...	5	

*Signed E. T. WATTS.*



**(A) TABLE OF DEATHS during the Year 1897, in the STANSTED RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.	
BERDEN ... ..	4	...	...	...	...	1	3	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	...	...	4
MANUDEN ... ..	5	1	..	...	...	2	2	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	4
LTE. HALLINGBURY	8	3	2	2	...	1	...	Under 5 5 upwds.	..	..	3	1	...	...	...	...	...	...	...	...	1	...	...	...	1	5	3	
GT. HALLINGBURY...	9	2	...	..	2	4	1	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	2	7
BIRCHANGER ... ..	8	4	...	...	1	3	...	Under 5 5 upwds.	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	4	4	4
STANSTED ... ..	28	5	1	...	1	10	11	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	4	6	22	
HENHAM ... ..	8	...	1	...	1	1	5	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	1	7	
UGLEY ... ..	2	...	...	1	...	1	...	Under 5 5 upwds.	...	...	...	...	...	1	...	...	...	...	...	...	...	1	..	...	...	...	2	
TOTALS ... ..	72	15	4	3	5	23	22	Under 5 5 upwds.	...	...	3	...	..	1	1	...	...	...	...	...	...	2	7	13	3	2	13	53



**(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the STANSTED RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.**

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Erysipelas.	Measles.				
								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
LTE. HALLINGRURY	611	...	13	Under 5 5 upwards	...	...	5 10	...	...	...	...	...	...	...	...	...	5 10	...
GT. HALLINGBURY	581	...	14	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BIRCHANGER	469	...	16	Under 5 5 upwards	...	...	...	...	...	...	...	...	1	2	...	...	...	...
STANSTED	2117	...	47	Under 5 5 upwards	...	...	3	...	...	...	...	...	...	...	...	...	...	...
ELSENHAM	423	...	17	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HENHAM	813	...	16	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	1	...	...	...	...
UGLEY	398	...	6	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	1	...	...	...	...
BERDEN	336	...	5	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MANUDEN	683	...	20	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	1	...	...	...	...
TOTALS	6431	8481	154	Under 5 5 upwards	...	...	5 13	...	...	...	...	...	...	5	...	...	5 10	...



### Water Supply.

This is a very important question, one which lately has been before the public in a very unfortunate aspect in other districts.

In the towns of Hertford, Ware, Bishop's Stortford, Hoddesdon, and Broxbourne, the supply is from deep wells, the water being derived from the chalk.

I have made an analysis of the Hertford, Bishop's Stortford, Ware, and Hoddesdon supplies, the results varying but little.

A pure water is obtained from these deep chalk wells, which is very hard, but free from organic matter.

So long as these wells are properly protected and the reservoirs placed in such a position as to be absolutely free from contamination, there should be no fear of infectious disease being water borne.

It should however be understood that leaky water pipes and fissures in the chalk constitute a danger.

In laying mains and pipes, the greatest care should be taken, the presence of a faulty joint, when a pipe is in proximity to a sewer, or gas pipe, or passing through made up ground, is always likely to allow of the entrance of foreign matter to the pipes.

### Rural Districts.

I am almost daily confronted with the difficult problems relating to this subject.

I constantly find houses without any water supply at all, and others, supplied from a pump some great distance away, or else by a draw well, more often than not, in a bad position close to a drain, cess-pit, manure heap, or pig-sty.

This shallow draw well is imperfectly covered, or not covered at all, the water is dipped out by means of a bucket or pail, this pail is often dirty, and thus frequently forms one of the means of polluting the water.

### Water Supply in Rural Districts.

In the rural districts of Hertfordshire and Essex, the matter of a water supply to groups of houses and villages is very difficult.

### Public Health and Water Acts.

Under the Public Health Act, 1875, and the Water Act, 1878, certain powers are given to local authorities, to enforce provision of a wholesome supply of water to individual houses, groups of houses and villages.

Under Section 62, of the Public Health Act, 1875 and Section 3 of the Water Act, 1878, duties are imposed on Rural District



Councils to cause houses within their districts, to be provided with a proper supply of water.

Under the Public Health Act, the Local Authority can only insist on a supply to a house, if the cost does not exceed the Water Rate authorised by any Local Act in force in the District or 2d per week, or such other cost as the Local Government Board may, on the application of the Local Authority, determine to be reasonable.

The Public Health (Water) Act, 1878, makes it the duty of a Rural Sanitary Authority, to see that every occupied dwelling house in their district "has within reasonable distance an available supply of wholesome water," but, unfortunately, Rural Sanitary Authorities have, in the past frequently been so liberal in their interpretation of the meaning of a "reasonable distance" and "an available supply," that the Act has been largely inoperative.

#### Weakness of the Acts.

Moreover the Act cannot be put into force unless the water can be provided at a reasonable cost, i.e., 2d per week, or such other cost as the Local Government Board may determine to be fair ; and as it often happens that a pure supply of water cannot possibly be laid on to a house except at a much greater cost, the Local Authority is then powerless to cause it to be provided.

It is certainly true that under Section 51 of the Public Health Act, 1875, a Rural Authority "may" provide their district or any contributory place therein, with a proper water supply, but the Section is only permissive, and unless a supply can be obtained at a reasonable cost, and danger arises to the health of the inhabitants, from the insufficiency or unwholesomeness of the existing supply, the Local Authority will not be legally in default by not providing their district with water.

Another very serious difficulty with which Local Authorities have to contend in their efforts to cause their districts to be provided with a larger supply of water, arises out of the wording of the 70th Section of the Public Health Act, 1875, which refers to the closing of a polluted well, &c.

According to this Section, and to recent decisions, it is necessary, before an order to close a well or other supply is made by the magistrates, to prove, not only that the water is polluted and dangerous to health, but that it is actually injurious to health.

Now, except in very rare instances, it is impossible to prove that the water of, say a polluted well, has actually injured the health of those drinking it, though the pollution may be extremely dangerous, and likely to injure health at any moment; and therefore, even though a Local Authority has brought a pure



supply of water to a village, they cannot compel the inhabitants to make use of it, unless they can prove that the existing supply is actually injurious to health.

This defect in the wording of the 70th Section of the Public Health Act, 1875, has long been recognised, and in the Public Health (London) Act of 1891 the word "injurious" was altered to "dangerous," and a similar amendment is necessary in the provinces.

I now lay before you some of the difficulties constantly met with, and suggestions as to how these could be overcome.

I take three different cases, namely:—

1. A whole village with a polluted and insufficient supply by means of shallow wells.
2. Part of a scattered village, or hamlet, with a supply from ponds, shallow dip-wells, or springs, unprotected; many of the houses a quarter-of-a-mile away from the nearest supply; many houses without any water at all during the summer months.
3. Isolated houses, without any supply at all, relying upon their nearest neighbours.

Although each case must be treated on its merits, I consider it would be of great benefit to Local Authorities and Medical Officers of Health if the Local Government Board would consider these questions.

On chemical analysis from the supplies above mentioned, the sample water may at times appear practically free from animal organic matter in solution; its appearance is generally turbid, with much sediment, consisting of living organisms, worms, hairs, vegetable matter, and all the various forms of pond life, and is besides liable to become polluted with slop-water and sewage, and any passing animal.

On the representation of the Medical Officer of Health to his District Council that a water supply is needed, the Clerk to that Council is asked to say how this water can be provided.

He quotes the Public Health Acts and Water Acts, and says that unless water can be provided at a cost of 2d. <sup>per head</sup> per house, or a well dug for £12, the Council are powerless in the matter.

As on first sight this appears impossible, the question of a water supply is postponed, and as I have already pointed out, under the existing laws the Authority is not in default if they do not insist on the provision of a wholesome supply of water, as on serving a notice by the local Authority to an owner of property to provide a wholesome supply of water to a house without such

supply, the local Authority are supposed to be in such a position to provide a supply of water, within the specified cost, if the owner refuses to do it, and to charge the owner with the expense; should, however, the cost exceed the stipulated amount, the Authority are not in default if they do not carry out the work, neither is the owner; in this case the house remains unsupplied with water, to the danger of the health of the inhabitants.

It is not the duty of an Authority to find water, but to see that houses are supplied; owners should be compelled to provide water or to pay the Authority for supplying their houses; the money so received should go to reduce the rates.

To meet the difficulties thus set forth, which arise daily in almost all rural districts, I would suggest that the Public Health Act and Water Act be so amended as to enable any Rural District Council to borrow money for supplying water to groups of houses, hamlets and villages, and to divide the expense among the owners, with or without their consent, that the limit of expense be extended, so that the amount charged can be increased according to the rateable value of the property.

I cannot imagine the owner of a property objecting to having a pure and plentiful supply of water laid on to each of his houses, and it simply amounts to this :—

Where a house is provided with pure water it would surely command a higher rent than a house with an impure supply or none at all.

There certainly exist cases where it is impossible to supply isolated houses from any waterworks; in these cases the laws should be amended as to make it possible that notice could be served on the owner to provide a wholesome supply of water, either by well or rain-water tanks, or else to close the houses as unfit for human habitation.

In the event of rain-water tanks being the only available supply, the cisterns should be large enough to hold a three months' supply, at not less than 10 gallons per head per day, and that these cisterns be placed in suitable spots, well away from all danger of pollution, and that they be properly constructed of suitable material, and that the water be filtered.

This should only be permissible when, from the peculiarity of the locality and the small number of houses, water cannot be obtained from any more suitable source.

### **Buntingford Water Supply.**

The question of a water supply to Buntingford has been before you on many occasions.



I have read the reports of the late Medical Officer of Health which go to show the necessity for some improvement in this direction.

The population is about 1500.

There are about 330 houses supplied with water from 100 shallow wells.

These wells vary in depth from 6 to 20 feet.

There are 3 public wells ; these wells are chiefly situated in the main street, and in danger of pollution, the water not always being available.

Samples of water from 18 of the wells have been analysed, and these analyses show that they are all more or less polluted.

My reasons for advising the provision of a wholesome and sufficient supply are :—

1. The water in the wells is sub-soil water and always in danger of pollution.

2. The quantity, even if the water was not polluted, is not sufficient.

3. The house drains and sewers do not get flushed, the quantity of water entering the sewer is not sufficient to flush it.

4. Should an outbreak of Typhoid Fever or Diarrhoea occur the germs of these diseases will find their way into the wells, and thus the disease will spread.

The argument, that the inhabitants have been drinking this water for many years, without any apparent ill effect, does not hold good ; there are many diseases besides infectious ones which are caused by impure water.

It is my duty to advise on every point which will improve the health of the district.

There is always a marked improvement in the condition of the people when a wholesome supply of water has been provided, to say nothing of the impetus which a plentiful supply of good water gives to trade.

I would therefore strongly advise the Council to take steps to provide a wholesome and sufficient supply of water from an extraneous source.

The expense would not be heavy, and would more than repay the outlay, both financially, and from a sanitary point of view.

On my reporting the above to the Buntingford Rural District Council, their Surveyor was instructed to get out an estimate as to the cost of supplying the town with water from a deep well outside the town ; this was done and an estimate given of £1,750.

A parish meeting was held and a resolution passed to the effect that a water supply was not necessary at present !

I do not think this is the opinion of the inhabitants of Buntingford, as all through the summer even up to the present time there is a scarcity of water ; this month, January, 1898, the people are to be seen passing backwards and forwards up the street carrying water which they have borrowed.

Mr. Thody's report contains all the elements of a good scheme but his statement that it would require a  $1/6$  rate is apt to mislead.

Taking for granted that the waterworks would cost £1,750, this at 5 per cent. for 30 years to repay capital and interest is £87 10s. per annum, to that and £100 for working expenses—£187 10s.

There are, say, 300 houses in Buntingford, all of which would take the water if it passed their doors.

Then 300 houses at 2d. per week—£130 per annum, leaving say £70 to be collected.

Now out of these 300 houses I certainly think 100 would be glad to pay £1 per annum extra for a wholesome supply of pure water.

It will thus be seen that if 300 houses are charged 2d. per week or 8s. 8d. per year, which is the amount allowed to be claimed, only £70 is required, and which would doubtless easily be obtained.

### Ware Rural Water Supply.

With the exception of Broxbourne and Wormley, all the villages derive their water from shallow wells, ponds, springs, or dipping holes.

Many cases have already come before me where houses are without any water supply at all.

The District Council have had much difficulty in dealing with these cases, as it was found impossible to provide water without sinking a deep well, which would cost more than the limit allowed by law.

The only remedy, as I have mentioned in another part of this report, is by amending the law so as to allow money to be spent in supplying houses with water.

### Hertford Rural District Water Supply.

The supply is by means of rain-water tanks, and shallow wells, dipping holes, springs, ponds, and a few deep wells.

Many houses are without a supply, or at least 200 yards from the nearest water, which in many instances is a dipping hole or pond.

I have reported on the supply to Burnham Green District, Walkern, Bennington, and Hertford Heath; estimates and plans have been submitted, and the Councils are considering these questions, and, I trust, will adopt a scheme for improving the water supplies.

#### Parish of Datchworth.

*Outline of a proposed Water Supply Scheme, by Dr. J. A. Turner, Medical Officer of Health, and Mr. Riggs, Surveyor and Sanitary Inspector.*

It is proposed to supply water from a deep well, situated on Burnham Green.

The water would be pumped by a horse, a wind engine, or oil engine, into a tank erected close to the well, at a height of about twenty feet above the ground.

It is proposed to lay a three-inch main from the tank to Bull's Green, Gover's Green, Datchworth Green, Painter's Green, School Green, and Hooybush Cottages, practically the whole of the parish, about three miles of mains.

This scheme would provide for the supplying of 120 houses, 7 larger houses, 4 public houses, and 6 farms for dairy purposes.

By the enclosed statement it will be seen that the total cost is estimated to be £1,500, which allows the large margin of £250 for contingencies.

The annual amount required to pay off principal and interest borrowed for thirty years would be £75, which is covered by the water rent, leaving working expenses of £25 a year to be raised out of the rates.

After the thirty years has elapsed, and the borrowed money paid off, the waterworks will become the property of the parish, who will derive an income of £75 per annum, probably very much more, in view of the development of the neighbourhood, which will go towards relieving the other rates.

Of the three schemes submitted, we recommend the oil engine having in view the possible further extension of the works.

For detailed particulars, we refer you to the accompanying estimates.

A Committee was formed to consider this scheme. It was resolved to try and supply Datchworth from an existing well, and Burnham Green from a pond in Punchard's Wood. Nothing definite has yet been done.



### Hadham Rural Water Supply.

The water supply here has been the subject of many reports during the year, and I enclose analytical report.

At Patmore Heath the Council have endeavoured to meet the question.

I have analysed three samples of water from shallow wells on the Heath.

I find that all the waters contain an excess of vegetable organic matter, but beyond this no evidence of any pollution by sewage.

Of the three, Mr. Edwards' well, although clearer than the other two, comes out chemically the worst ; this is probably due to its proximity to the house, and the possibility of slop water, etc., gaining access to the well.

The other two samples are practically the same ; the smell given off from No. 3 being caused by decaying vegetable matter. All this water then is subsoil water, which varies in quality and quantity according to the season.

No open shallow well water of this description can be safely used for drinking purposes, as although not contaminated at the present time, may at any moment become polluted.

Should a case of Typhoid Fever occur in a house and the inmates observe every precaution, it is possible for the water to become polluted with the Typhoid germs by means of a dirty bucket into which the slops from the infected house may have found access.

The nearer the open shallow well is to the house the greater is the danger of pollution.

Supposing then it were possible to protect the existing supply of water by making properly constructed tanks and wells, and fixing pumps, the water itself would be chemically pure, but the presence of decaying vegetable matter would cause it to become very objectionable, if not even injurious to health.

The result of my inquiry then is : —

Between 30 and 40 houses obtain water from these three wells.

On chemical analysis there is no evidence of animal organic pollution, but the water cannot be passed as safe for drinking purposes.

The water is of the same composition as the adjoining pond water, and varies according to the season, both in quantity and quality, and is derived by soakage through the soil until it reaches an impervious stratum.



The open draw wells vary from 3 to 15 feet deep, and are in constant danger of pollution.

If this water could be collected and stored in suitable tanks, properly protected, and constant attention given to the cleaning of the tanks, and placed in available positions, I should consider the supply to be a wholesome one.

To do this it would be necessary to construct reservoirs and properly protect and ventilate them, and allow the water to pass through filtering media into a well which is properly protected and a pump fixed.

Failing this, there is no alternative but to sink a deep well, and provide a wholesome and sufficient supply.

Mr. Watts, your Surveyor, drew up a report and scheme for supplying several adjoining villages with water, which I include.

The scheme is undoubtedly a good one, and one which should receive your attention.

The following letter was sent to the owners of cottages at Patmore Heath :—

“It having been represented to this Council by their Medical Officer of Health that the water supply at Patmore Heath is polluted and insufficient, they have had under consideration the best means of providing a proper supply, and are advised that a deep well should be sunk near the centre of the Heath, into the chalk.

“Mr. Ingold, a well sinker, has estimated the cost at £120.

“It will also be necessary that a drain for the waste water should be made, and a fence round the pump erected, at an estimated cost of £8 10s.

“If the owners of the property contribute two-thirds of the cost among themselves, the Council will provide the remainder.

“The Council rely on the owners being willing to contribute their share, according to the rateable value of their property, and hope they will signify their willingness by signing the agreement.

“The Council are prepared to carry out the work.”

Mr. E. T. Watts, Surveyor and Sanitary Inspector, laid a report before the Hadham Rural District Council, which embraced a scheme for supplying Much Hadham, Little Hadham, Albury, and Furneaux Pelham with water, altogether about 500 houses; he proposes pumping the water from a deep well at East-end, Furneaux Pelham, into a reservoir raised 40 feet above the level of the ground by means of a windmill giving an 8 to 10

horse power, and would pump 3,000 gallons per hour, with an auxiliary oil engine to assist when required.

The cost is estimated at £4,500, repayable by annual instalments of £220.

The probable amount as rent received during the first year would be £210, leaving £10 to be raised with an additional £150 per annum for working expenses, making altogether £160 per annum.

This amount would decrease yearly as more houses took the water.

There is no doubt but that this proposal is a step in the right direction, and I would supplement Mr. Watts' figures by saying that out of 500 houses, say—

300	paid 2d. per week, or 8s. 8d per annum	...	£130 per annum.
100	„ £1 per annum	... ..	£100 „ „
100	„ £1 10s. 0d. per annum	... ..	£150 „ „
Total ... ..			£380

Which more than covers the annual expense.

#### Stansted Rural District Council.

*Water Supply.*—With the exception of Stansted, the villages derive their water supply from shallow wells and ponds and dipping holes.

The same difficulties are met with here; the water in the shallow wells may become polluted, and thus be the means of spreading disease.

#### Flushing Cisterns for W.C's.

The absence of flushing cisterns to the W.C's. in the Borough of Hertford, Ware, Hoddesdon, and Bishop's Stortford, is likely to be the cause of serious inconvenience, and at times the means of spreading disease.

I consider that any W.C. without proper means of flushing is always liable to be a nuisance and dangerous to health.

The Hertford Corporation prosecuted several occupiers of houses in Bengoe for not providing means for flushing W.C's. according to the Bye-laws.

The case was heard, judgment being postponed.

Some three months afterwards judgment was delivered, convicting the defendant.

It is difficult to understand that occupiers are liable if the W.C's. are not supplied by flushing cisterns, but the Bye-law

distinctly says that no W.C. shall be without proper means of flushing at all times.

If Bye-laws are to be of any use at all they should be enforced, although it is exceedingly hard on the occupier to be fined because his landlord will not provide a proper system of flushing.

There is no doubt that the evidence given before the Magistrates proved that the W.C's. in question were without proper means of flushing, and were in such a state as to be a nuisance and injurious to health.

No ordinary hand flushing can supersede the automatic flushing cistern.

Periodical inspection by the Sanitary Inspector can remedy defects in cisterns, but no amount of supervision will make people clean the W.C., and cause them to pour two gallons of water into the basin of the W.C. every time they use it.

---

---

## Inspection of the District.

In many villages a house to house inspection has been made.

The whole of the Hertford Rural District has been inspected, and many cases of overcrowding and dilapidation have been reported on.

Hertford Heath, Walkern, Watton, Bennington, Bramfield, Hertingfordbury, Little Berkhamstead, Datchworth, Burnham Green, Bayford, have all, during the year, been the subjects of reports to the Council : houses dilapidated and unfit for habitation, absence of water supply.

### Ware Rural.

Hunsdon, Puckeridge, Standon, Stanstead.

House to house inspections have been made, and many dilapidated houses reported on ; 6 cases of overcrowding abated.

### Hadham Rural. Stansted Rural.

The inspection of these districts has been carried out systematically, but much difficulty is experienced in dealing with the houses of the working classes.

In most cases the houses are built of wood and thatch : the floors are sometimes not bricked or boarded over, and in many cases the houses are damp.

Two houses were closed at Little Hallingbury.



### Houses of the Working Classes.

Cases of overcrowding have been reported on in Bishop's Stortford, Hertford, Ware, Buntingford, Hoddesdon, and also in the Rural Districts of Hertford, Ware, Hadham, and Stansted.

Much difficulty is experienced in controlling overcrowding owing to the scarcity of houses.

There are in fact many houses in both Urban and Rural Districts which are hardly fit for human habitation ; and I trust that in the coming year much will be done in improving the dwellings of the poorer classes.

At present, if the houses are closed, the tenants have to go to the Workhouse, or leave the district.

It is not to be wondered at that the District Councils are rather shy at making closing orders.

I think the County Council would be well advised if they brought forward some scheme for the amelioration of the dwelling houses of the working classes.

The depopulation of the Rural Districts is partly accounted for by the better accommodation and higher wages that are to be earned in towns.

The powers given to District Councils to borrow money for building cottages is not likely to be used unless it is suggested by the ratepayers themselves, and as this is very unlikely, the Act becomes a dead letter.

### Infectious Disease.

**Typhoid Fever.** No serious outbreak of this disease occurred, 18 cases only were notified, with 5 deaths ; the mortality is a high one, being 27 per cent. of cases notified.

I have treated of this disease under the different districts.

Out of 18 cases, 5 occurred in the Hertford Urban and 4 in Hertford Rural respectively, the cases in the Rural District all occurring in one house at Hertford Heath, and undoubtedly spread by means of insanitary surroundings, the first case being imported into the house and thus being the means of spreading the disease.

In Hertford town each case was traced, and the patients isolated or removed to Infirmary ; the disease did not spread.

In Ware two cases occurred and were removed.

At Albury two cases occurred : not removed.

The disease called Typhoid or Enteric Fever has been very prominently before the public during the past year, and the

attention of District Councils has been drawn to the possible pollution of their water supplies.

I would like to point out that it is a popular idea, and even some Medical men still cling to the belief, that Typhoid Fever is not infectious and can only be contracted through the medium of infected milk and water; that these opinions are unsafe is the least that can be said, and the sooner all Medical men and the British public realise the fact that the germs of Typhoid Fever can live outside the body, in suitable media, and can be transmitted in this condition by means of the dust, or air of the sick room, or from the infected bedding and clothing, and then find entrance into the alimentary canal of the human or animal, the better it will be for the prevention of the spread of this disease.

### Diphtheria.

I have had occasion to report on the occurrence of this disease during the year, and made the following recommendations to the District Councils :—

It is very important that the throats of all suspected cases of Diphtheria should be examined Bacteriologically.

Many mild cases of Diphtheria exist which are not recognised unless examined in this way, while many persons suffer from sore throat which is called Diphtheritic and is really not so, and may be sent to Hospital unnecessarily.

I would advise that each Medical man in the District be requested to send a swab, or piece of membrane from the throat, to my Laboratory, where it will be examined, and the presence or absence of the Diphtheria Bacillus ascertained.

In this way it will be possible to discriminate between true and false Diphtheria, and much time, trouble and expense spared to the Authority and all concerned.

For this examination the Authority will pay half-a-crown, which practically only covers the expense of the diagnosis.

In accordance with this a resolution was passed that all Medical men in the combined Districts should receive notices to the following effect :—

“You are requested to send to Dr. J. A. Turner, M.O.H., a swab or piece of membrane from all cases of suspected Diphtheria, so that he may examine it Bacteriologically and report to you.”

The Council will bear all expense in connection with this.

Boxes containing swabs have been sent to all the Medical men with printed directions and the address of the Medical Officer of Health.



### **Hospital Accommodation and Disinfection.**

Hertford Urban, Ware Urban, Hertford Rural, Ware Rural, and Hoddesdon.

Up to the present the Hospital accommodation has been three iron and wooden buildings at Little Gobions, near Hertford, where cases of Scarlet Fever only have been treated.

The Joint Hospital Board formed by the above Districts has now completed the New Hospital at Gallows Hill, midway between Hertford and Ware.

This Hospital is on a magnificent site, of about six acres, overlooking the valley of the Lea, and consists of three brick pavilions and two iron blocks, capable of receiving about forty patients, with a brick administration building, disinfecting apparatus, laundry, drying rooms, and mortuary, etc.

The diseases of Typhoid Fever, Scarlet Fever, and Diphtheria will be treated here.

A Bacteriological Laboratory has been fitted up for the Medical Superintendent, who is also Medical Officer of Health to the combined Districts.

The Hospital is to be opened early in March.

The District is to be congratulated on possessing an institution second to none of its kind in England. The members of the Joint Hospital Board have been indefatigable, and I trust will consider the immense amount of time they have given has been well spent, and the institution which has arisen will form a fitting monument to mark the result of their labour.

### **Bishop's Stortford Urban and Rural Hospital Accommodation.**

The Urban District of Bishop's Stortford has an iron building just outside the town, where cases of Scarlet Fever or Diphtheria can be treated.

Fortunately during the year it has been possible to treat cases of both these diseases because they occurred at different periods, but should an outbreak of Diphtheria and Scarlet Fever occur at the same time, only one disease could be treated in Hospital.

At present Typhoid Fever cannot be treated in Hospital.

Bishop's Stortford Rural Districts have Hospital accommodation in the form of wooden buildings near to the Union Workhouse; this was formerly the property of the Guardians, but has lately been purchased by the two Rural District Councils.

Scarlet Fever and Diphtheria can be treated here. At present the disinfecting apparatus is not satisfactory; hitherto the disinfector at the Workhouse has been used for disinfecting for

both the Urban and Rural Districts, but it does not do the work satisfactorily, and it has been decided to purchase a more modern apparatus.

When the question arose my opinion was asked as to the best method of disinfection ; I took the opportunity of advising the Urban District Council and the two Rural Districts to unite and form a Joint Hospital Board, with one Hospital and one disinfecting apparatus.

I reported on this as follows :—

There would then only be one centre, or focus of infection in the neighbourhood, instead of two ; infected clothes would never leave the premises.

With proper management, any possible chance of the spread of infection from the Hospital would thus be avoided.

At present two separate Hospitals exist, within a short distance of each other, which is quite unnecessary.

As your Medical Officer of Health, I would advise that this Committee recommend the Board to combine with the Rural Districts in providing a Joint Hospital, and disinfector ; and the formation of a Joint Hospital Board for the entire administration of the whole.

I advise this, as it is, in my opinion, to the interest of all concerned, being the cheapest and most efficient way of controlling the spread of infectious disease.

#### Buntingford.

There are no means for isolating cases of infectious disease in the Buntingford District.

I have reported to that Authority on the necessity of a small Hospital, but up to the present nothing has been done.

During the year 30 cases of Scarlet Fever occurred, and were treated at home, resulting in two deaths ; one case of Diphtheria, with one death.

During the year in the whole of the combined Districts

125 cases of Scarlet Fever were notified :

76 treated in Hospital, no deaths.

49 „ at home, 6 deaths.

78 cases of Diphtheria :

31 removed to Hospital, 6 deaths.

47 treated at home, 7 deaths.

Of these Diphtheria cases some were very mild, and it is doubtful if they were true Diphtheria.

The cases of Diphtheria removed to Hospital were in the Bishop's Stortford Urban and Rural Districts.

## Statistics for 1895.

Combined Districts, population 63,993.

Birth Rate	24·7	per 1,000	of the population.
Death „	15·6	„	„
Zymotic Rate	·56	„	„
Infant Mortality	124	„	births.
Phthisis	1·2	„	population.
Cancer	·8	„	„
Other Lung Diseases	2·5	„	„
Diarrhoea	·4	„	„
Measles	·01	„	„
Typhoid Fever	·008	„	„

## Statistics of the Birth and Death Rates for the Combined Districts of East Herts and Essex, for 1896.

Birth Rate ... ..	25·5	per 1,000	of the population.
Death „ ... ..	14·3	„	„
Zymotic Rate ... ..	·9	„	„
Infant Mortality...	96·5	„	births.

(A) TABLE OF DEATHS during the Year 1895, in the COMBINED SANITARY DISTRICTS OF EAST HERTS AND ESSEX, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																									
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric or Typhoid Fever.	Puerperal Fever.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.	Cancer.	Injuries.	All other Diseases.	Total.						
WARE URBAN ...	}	...	...	...	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
WARE RURAL ...								5 upwds.	...	...	4	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	20	53	...	15	...	...	...
HODDESDON ...								...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BISHOP'S STORT- FORD URBAN ...	}	...	...	...	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
BISHOP'S STORT- FORD RURAL ...								5 upwds.	...	1	3	...	...	1	...	...	...	...	6	6	...	28	43	...	17	...	...	...	...	...	...	...	
HADHAM RURAL								...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
STANSTED RURAL	}	...	...	...	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
BUNTINGFORD ..								5 upwds.	...	...	1	...	...	...	...	...	...	...	5	1	...	10	9	...	7	...	...	...	...	...	...	...	
HERTFORD URBAN								...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HERTFORD RURAL	}	...	...	...	...	...	...	Under 5	...	...	7	...	...	1	...	...	1	4	14	...	21	50	...	13	...	...	...	...					
TOTALS ... ..								Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwds.	...	1	15	...	...	5	...	...	1	16	28	...	79	160	...	52	...	...	...	...	...	...	...	...	...





(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1897, in the COMBINED DISTRICTS OF EAST HERTS AND ESSEX, classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES.	Population at all ages.		Registered Births.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.												Number of such Cases removed from their Homes in the several Localities for treatment in Isolation Hospital.		
	Last Census.	Estimated to middle of 1897.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Erysipelas.	Measles.				
								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
HERTFORD URBAN...	9023	9023	237	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HERTFORD RURAL ...	8317	8511	194	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
WARE URBAN ..	5249	5243	164	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
WARE RURAL...	...	10487	210	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HODDESDON ...	...	4542	117	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BISHOP'S STORT- FORD URBAN ...	6560	6528	179	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HADHAM RURAL ...	...	8491	154	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
STANSTED RURAL } (ESSEX) ...	..	8481	179	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BUNTINGFORD ...	5544	5439	118	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS ...	...	...	...	Under 5 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...



(A) TABLE OF DEATHS during the Year 1896, in the COMBINED DISTRICTS OF EAST HERTS AND ESSEX, classified according to DISEASES, AGES, and LOCALITIES.

[illegible]



(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1896, in the COMBINED DISTRICTS OF EAST HERTS AND ESSEX, classified according to DISEASES, AGES, and LOCALITIES.

[illegible]



